

FIG. 1

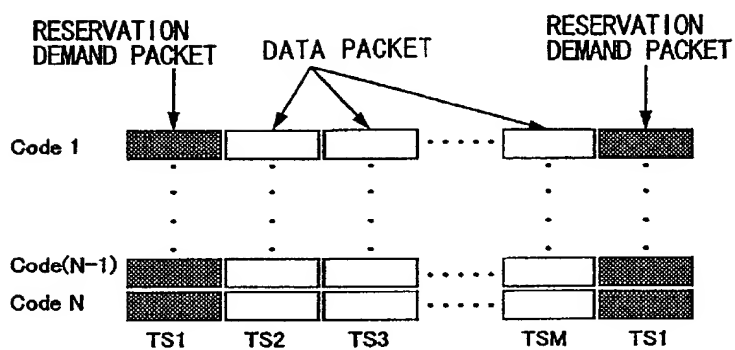


FIG. 2

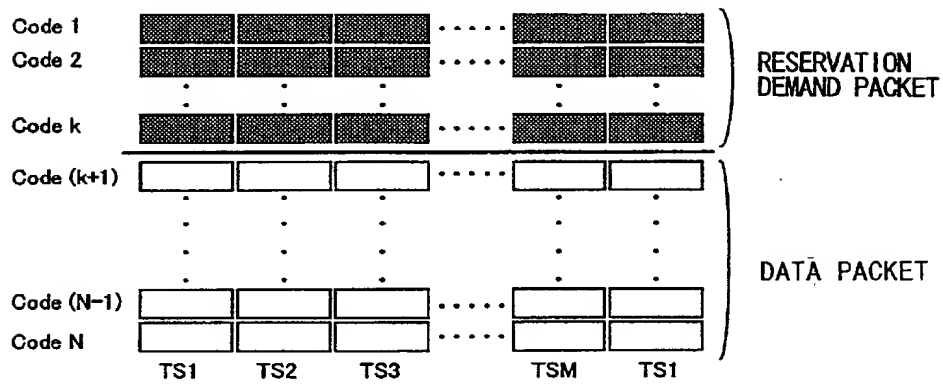


FIG. 3

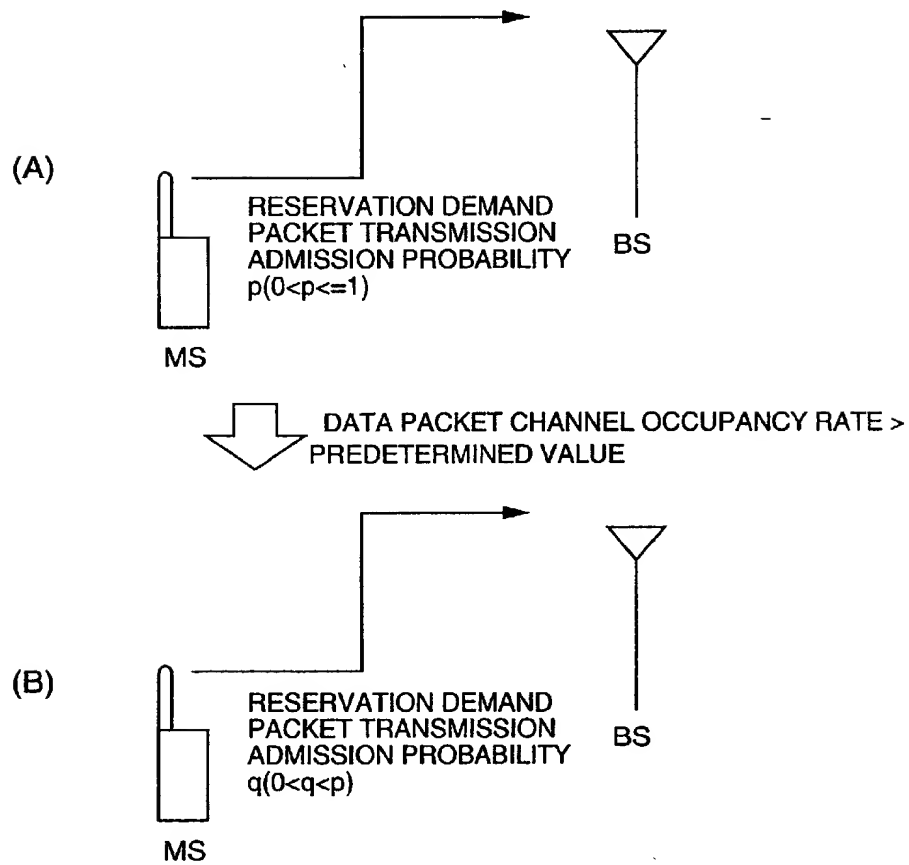


FIG. 4

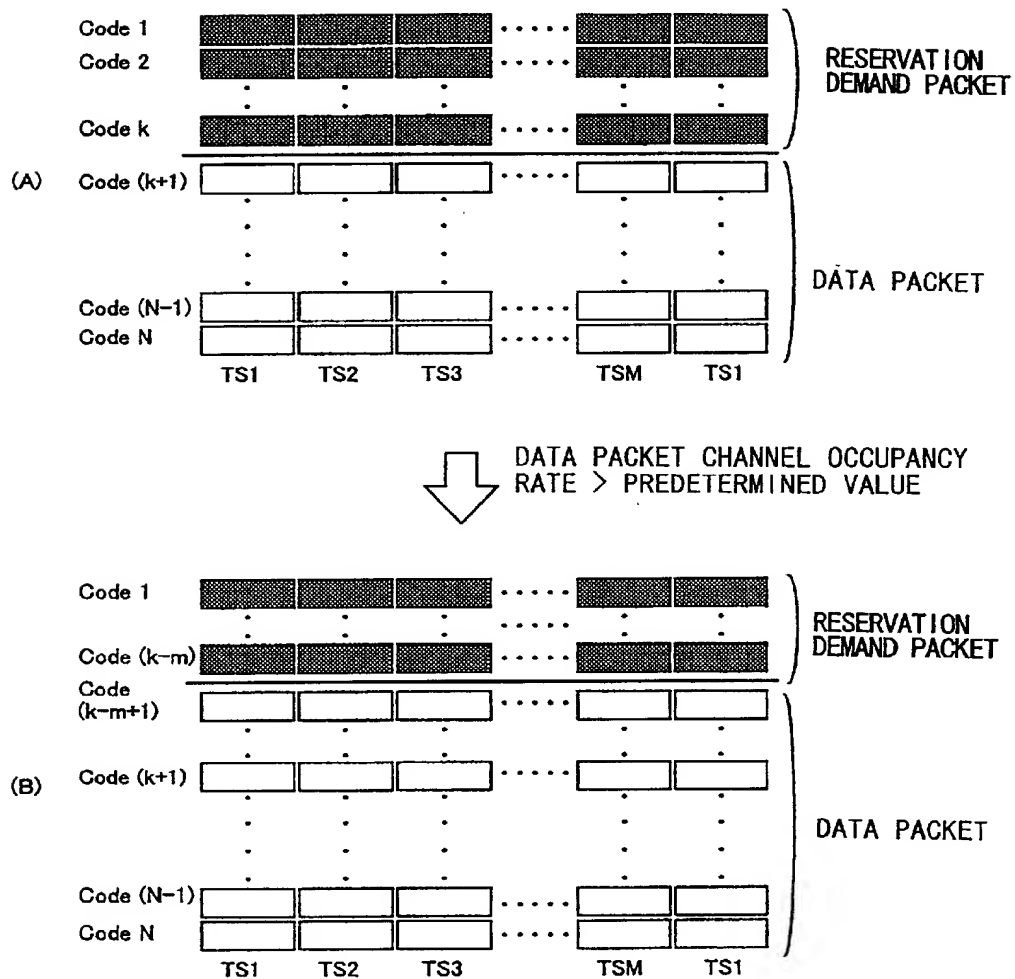


FIG. 5

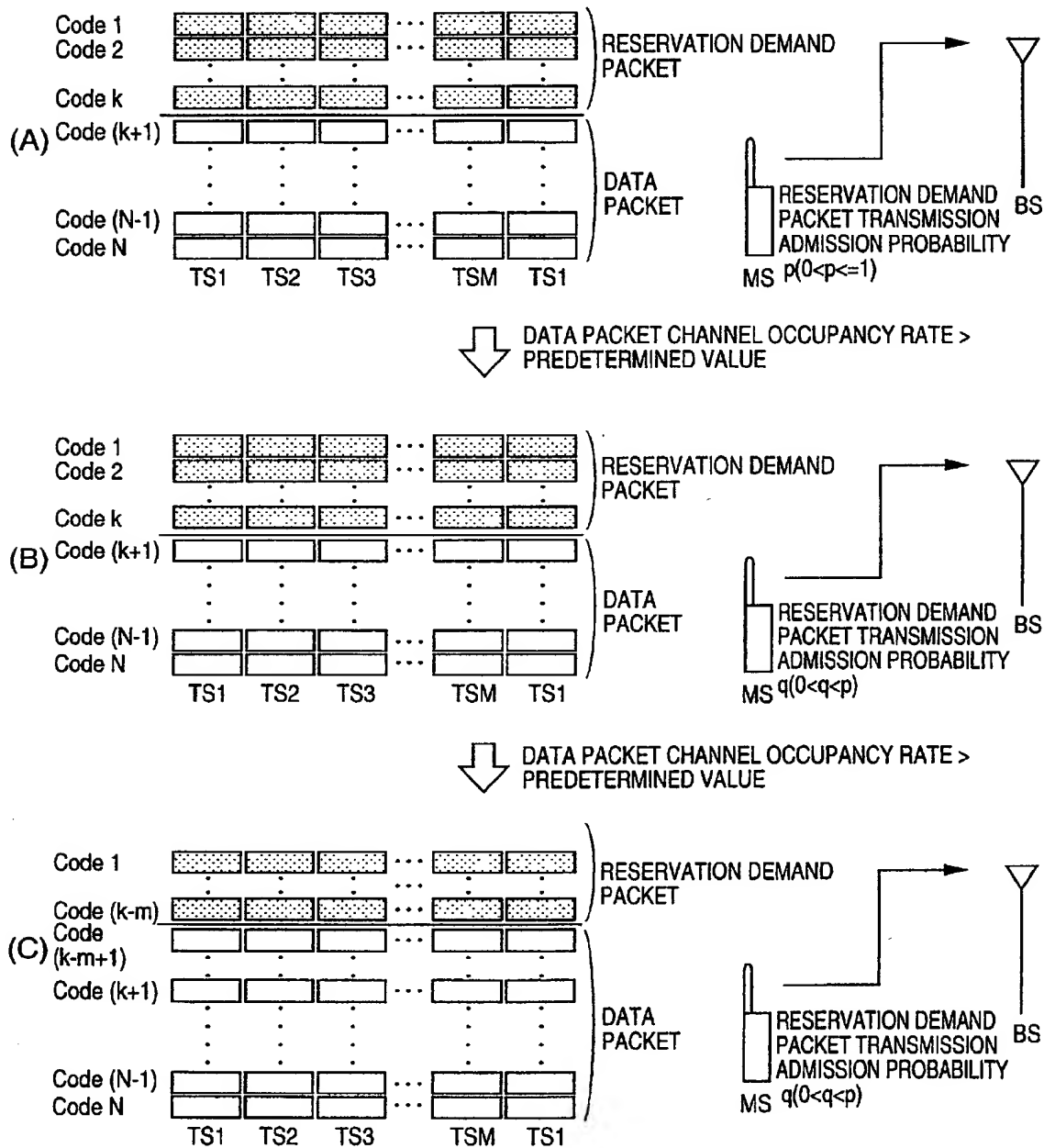


FIG. 6

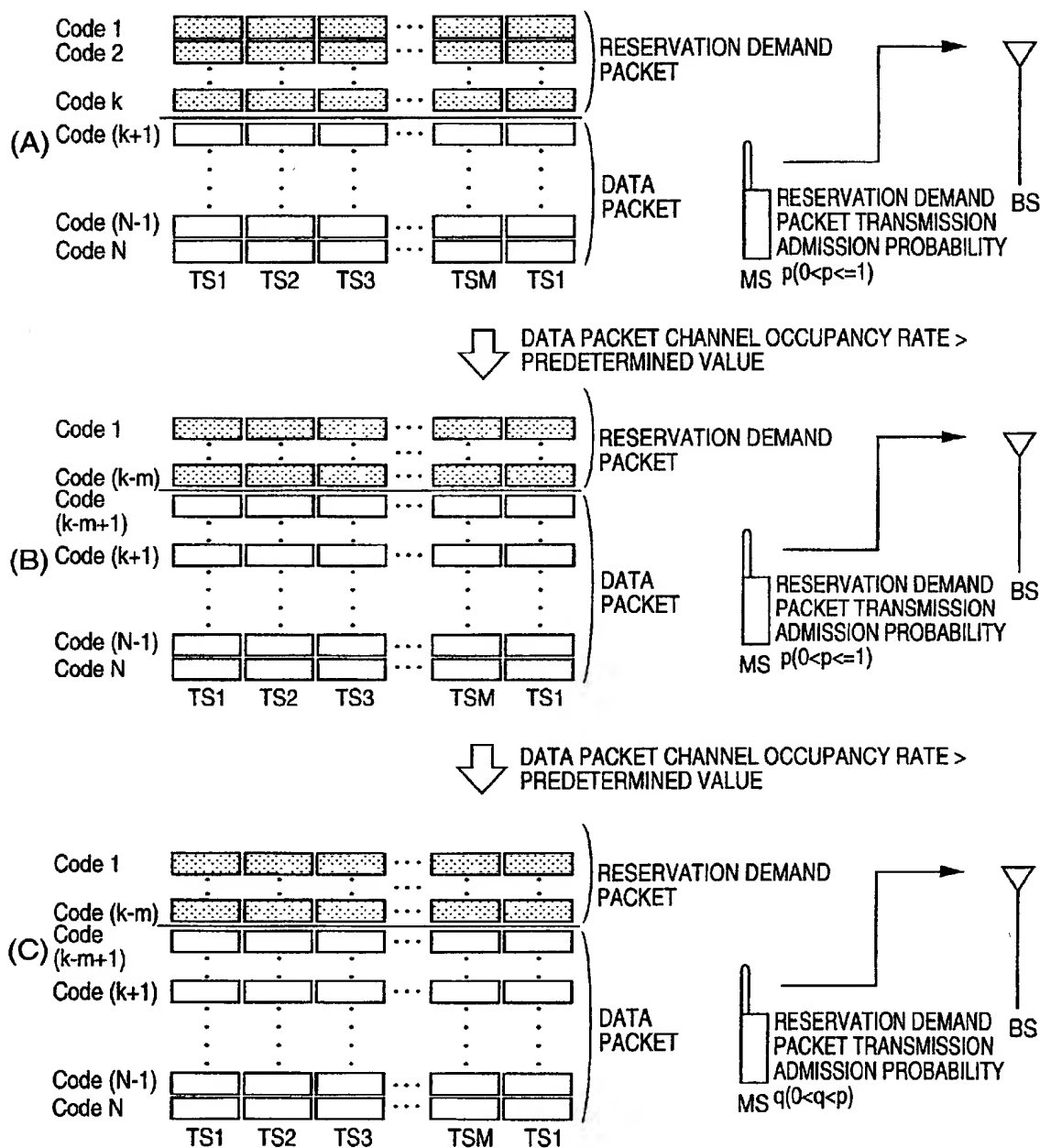


FIG. 7

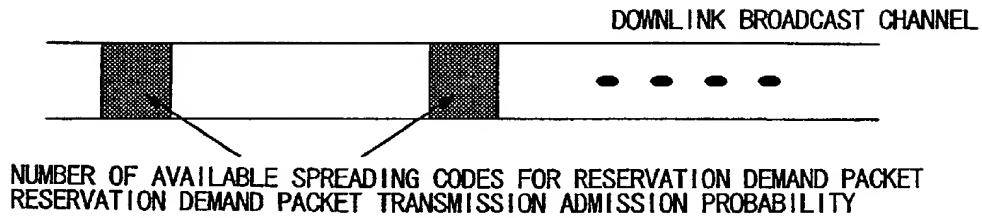


FIG. 8

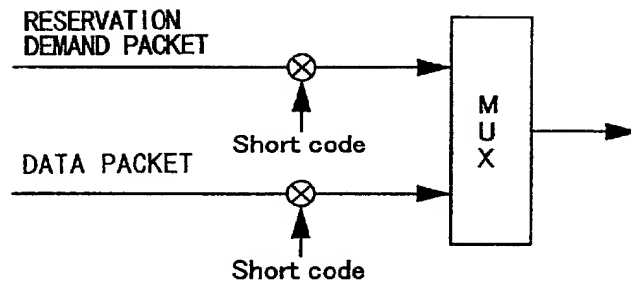


FIG. 9

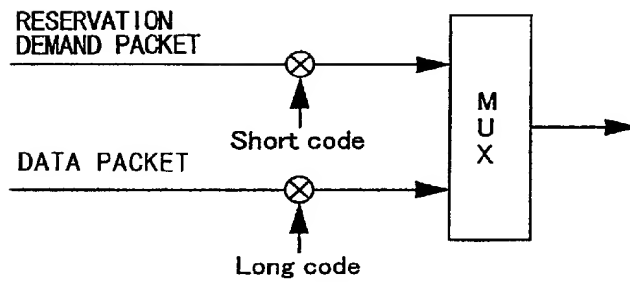


FIG. 10

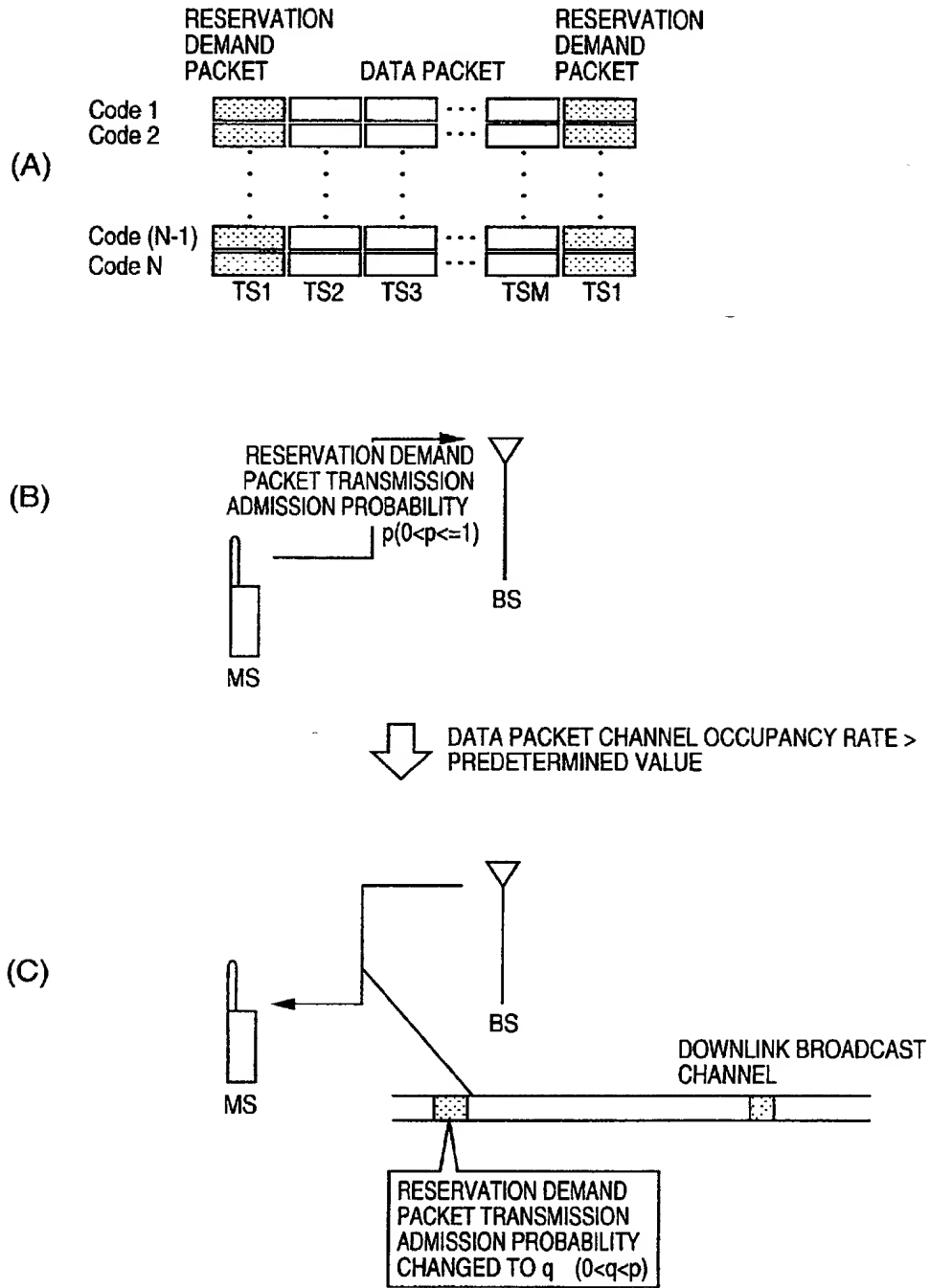


FIG. 11

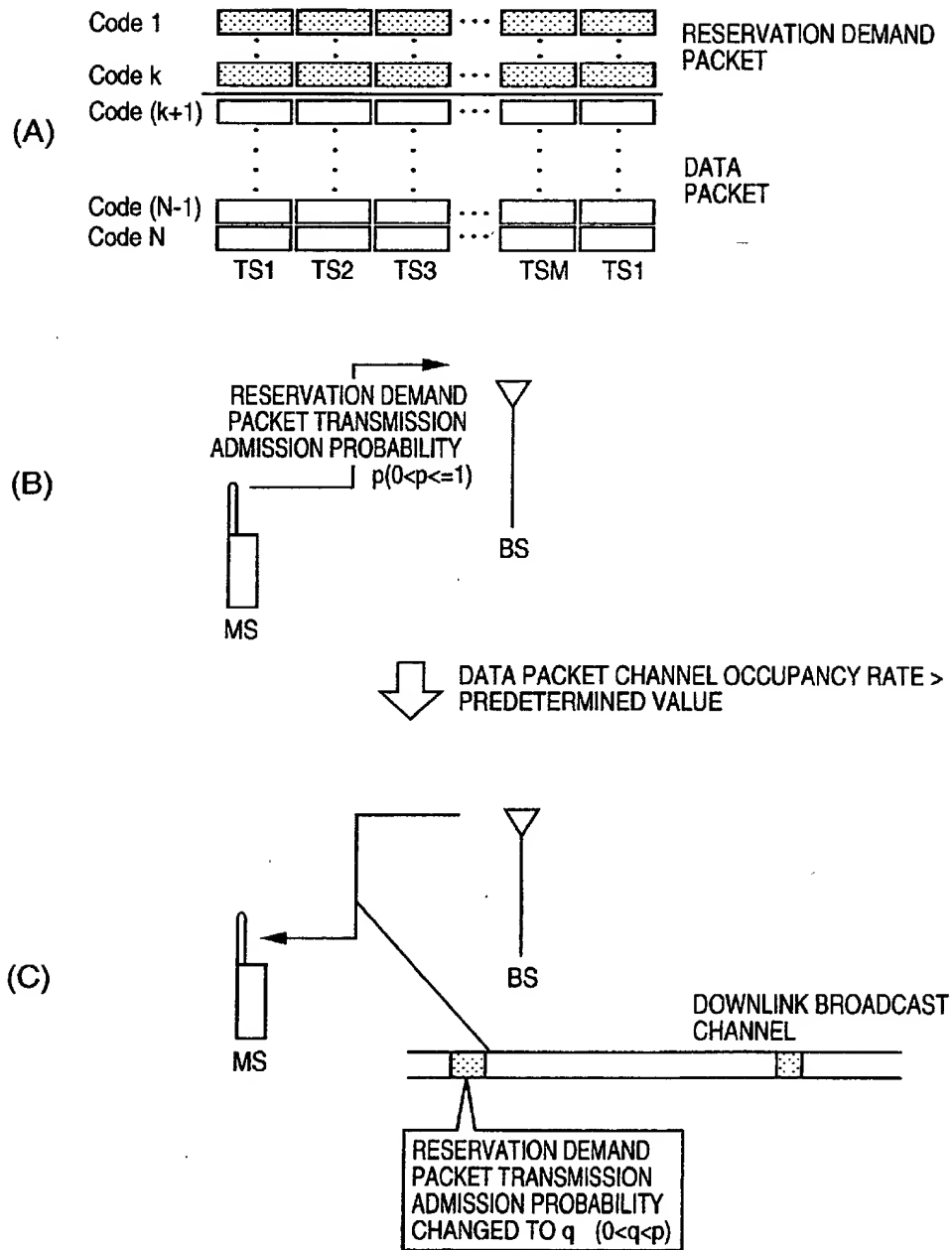


FIG. 12

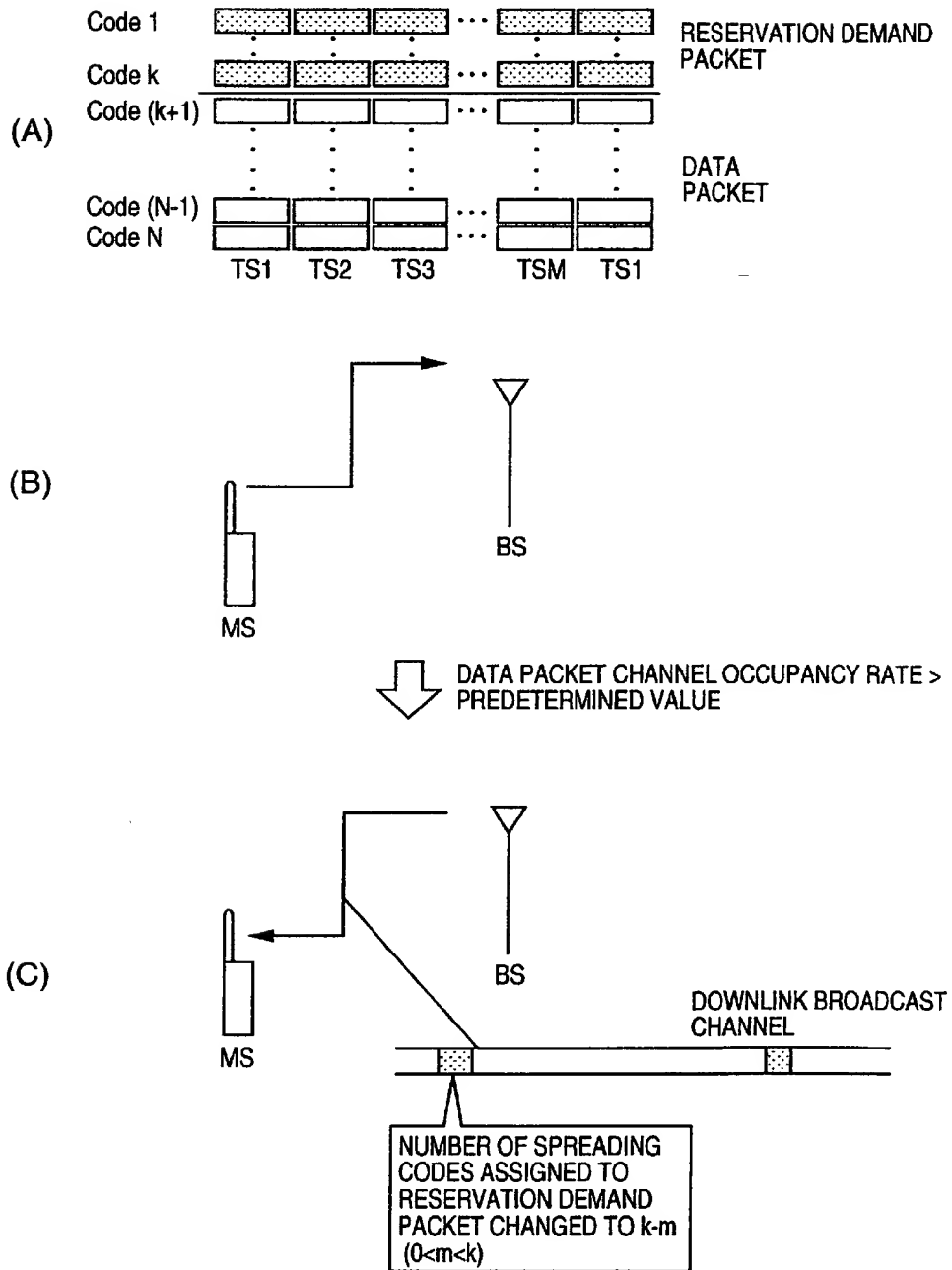


FIG. 13

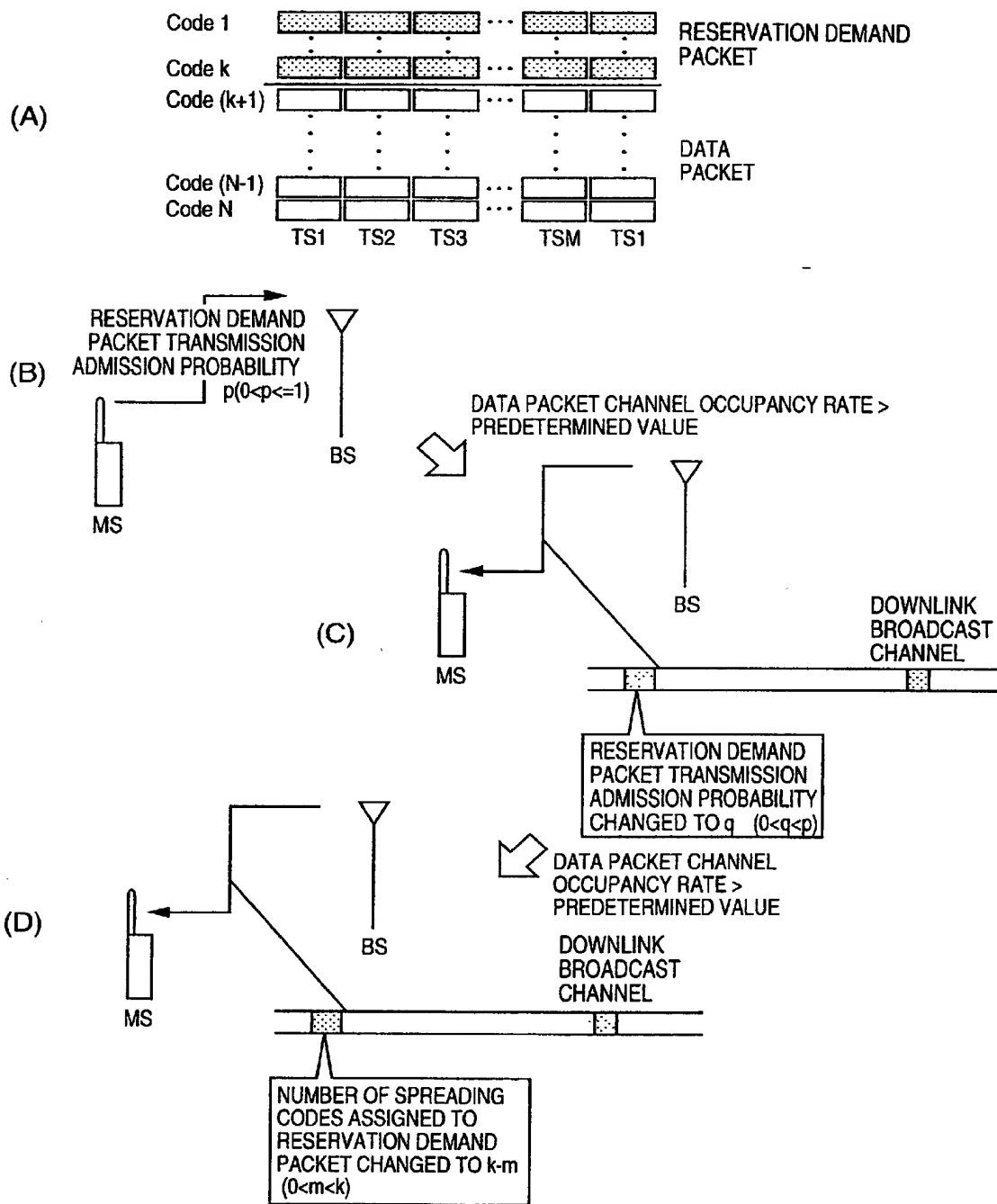


FIG. 14

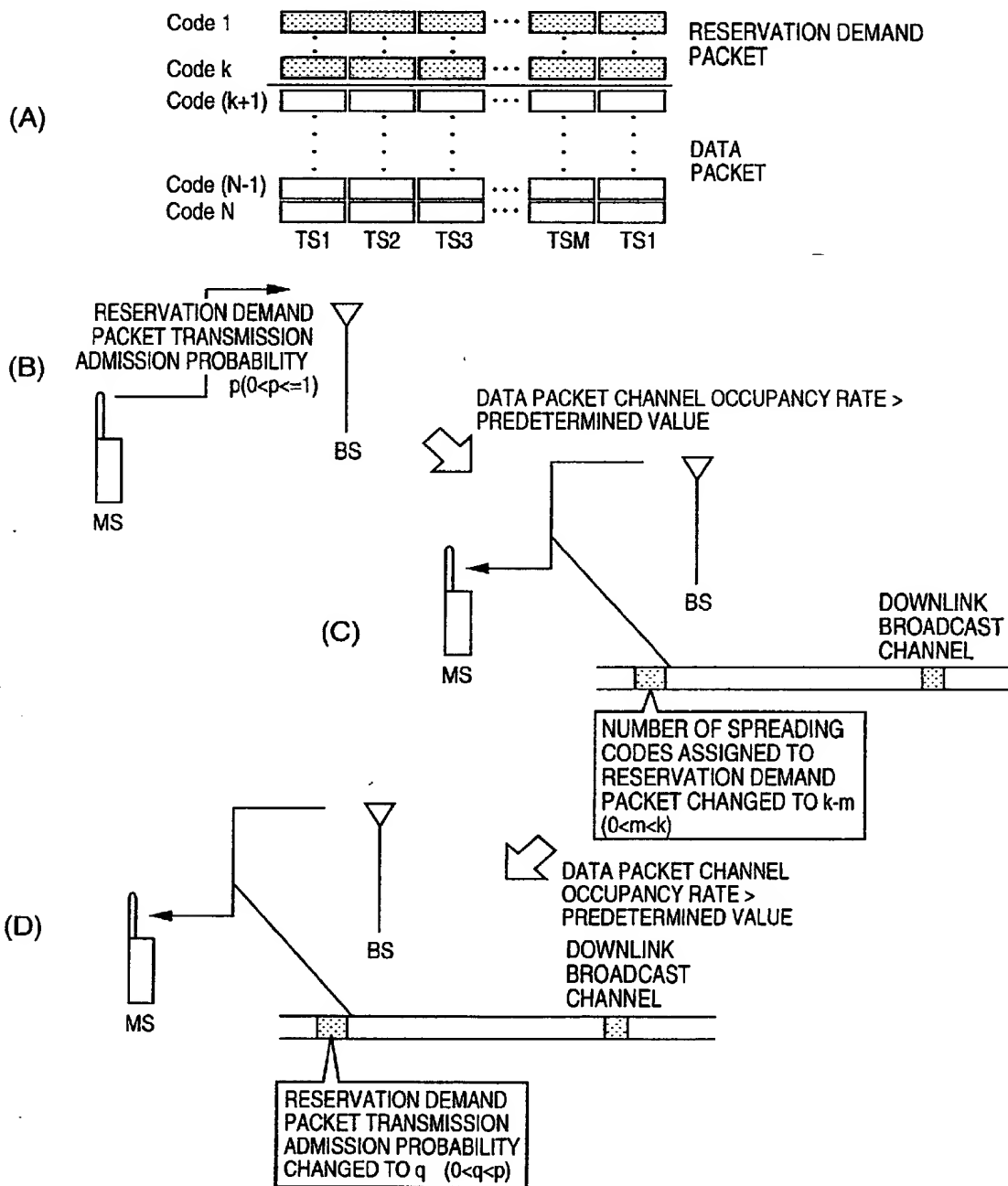


FIG. 15

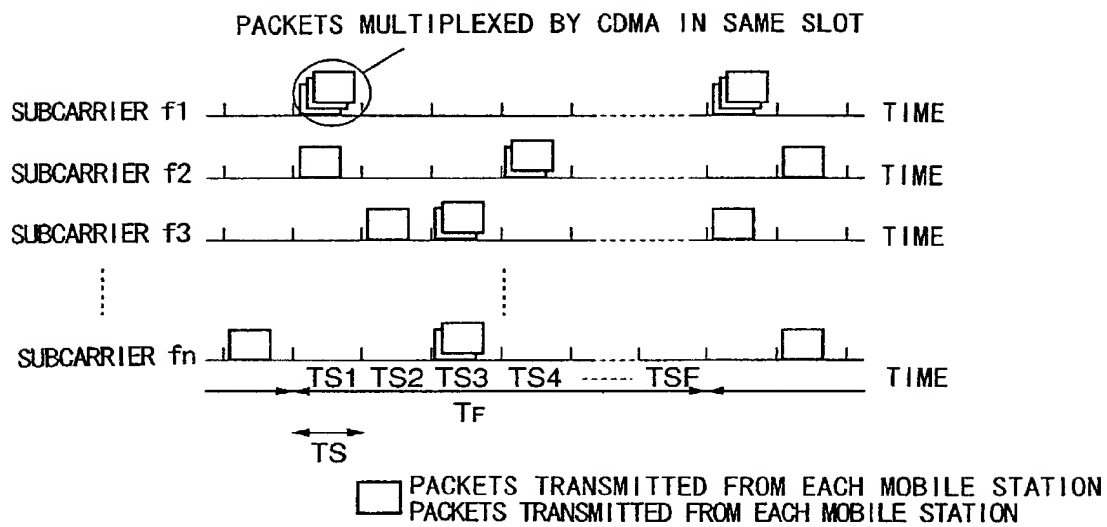


FIG. 16

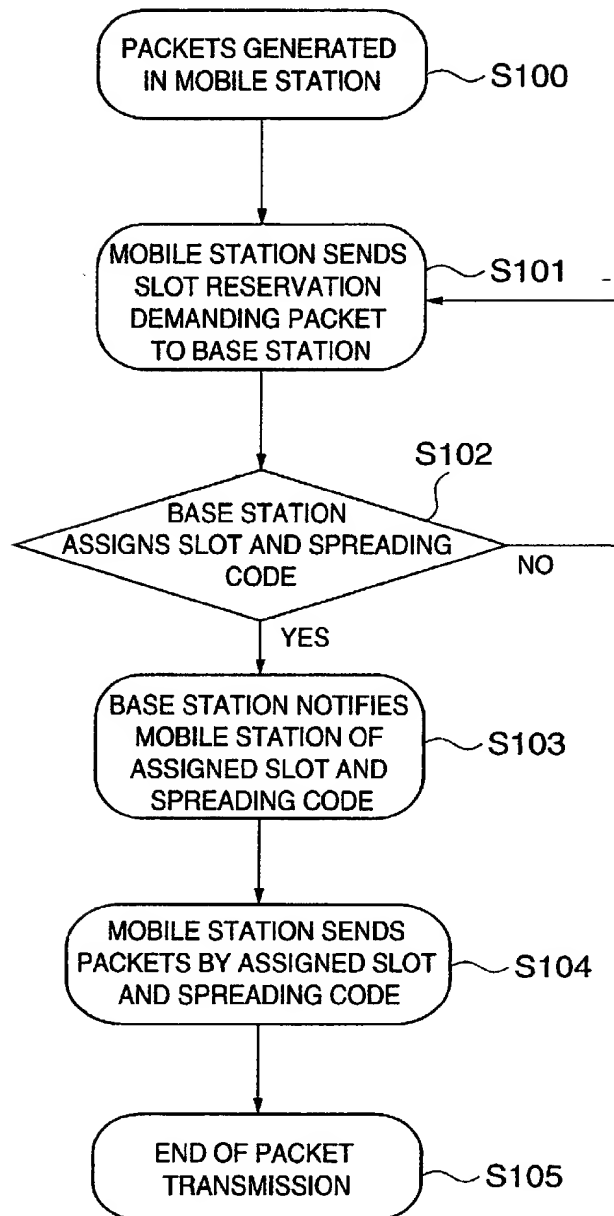
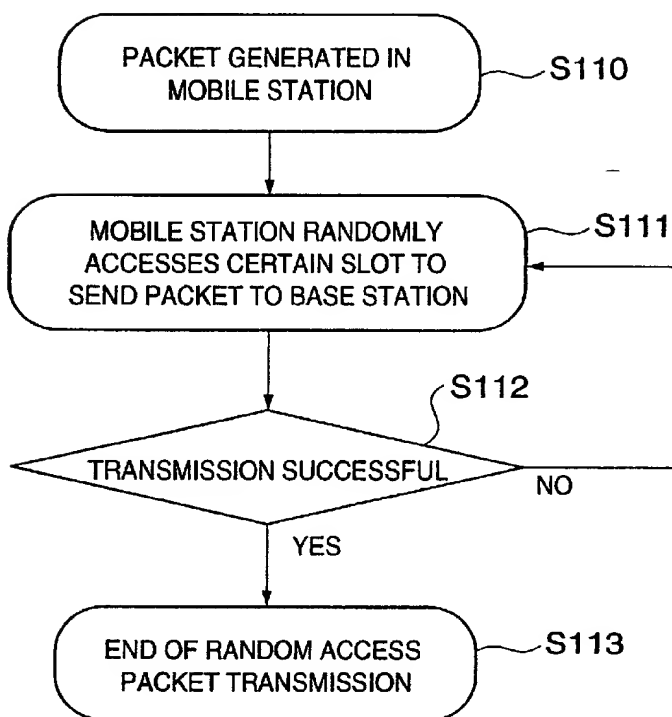
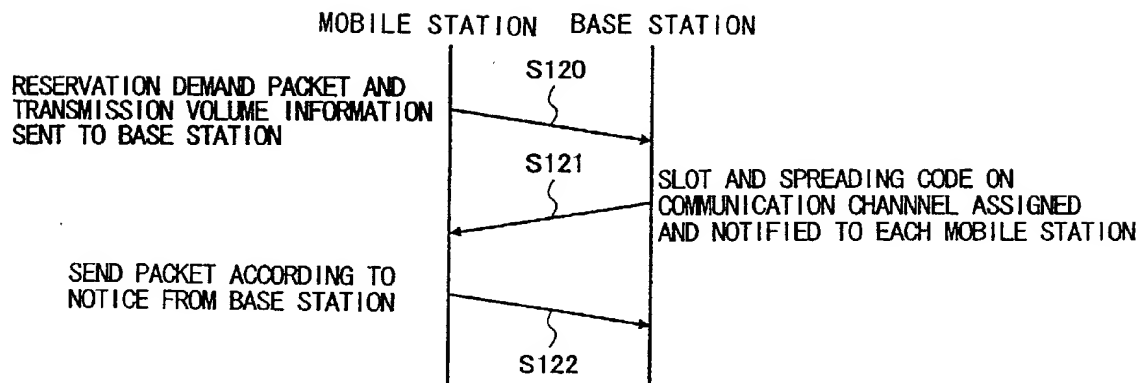


FIG. 17



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FIG. 18



Country	Year	Value	Unit
Algeria	1980	1.00	1000
Algeria	1981	1.00	1000
Algeria	1982	1.00	1000
Algeria	1983	1.00	1000
Algeria	1984	1.00	1000
Algeria	1985	1.00	1000
Algeria	1986	1.00	1000
Algeria	1987	1.00	1000
Algeria	1988	1.00	1000
Algeria	1989	1.00	1000
Algeria	1990	1.00	1000
Algeria	1991	1.00	1000
Algeria	1992	1.00	1000
Algeria	1993	1.00	1000
Algeria	1994	1.00	1000
Algeria	1995	1.00	1000
Algeria	1996	1.00	1000
Algeria	1997	1.00	1000
Algeria	1998	1.00	1000
Algeria	1999	1.00	1000
Algeria	2000	1.00	1000
Algeria	2001	1.00	1000
Algeria	2002	1.00	1000
Algeria	2003	1.00	1000
Algeria	2004	1.00	1000
Algeria	2005	1.00	1000
Algeria	2006	1.00	1000
Algeria	2007	1.00	1000
Algeria	2008	1.00	1000
Algeria	2009	1.00	1000
Algeria	2010	1.00	1000
Algeria	2011	1.00	1000
Algeria	2012	1.00	1000
Algeria	2013	1.00	1000
Algeria	2014	1.00	1000
Algeria	2015	1.00	1000
Algeria	2016	1.00	1000
Algeria	2017	1.00	1000
Algeria	2018	1.00	1000
Algeria	2019	1.00	1000
Algeria	2020	1.00	1000
Algeria	2021	1.00	1000
Algeria	2022	1.00	1000
Algeria	2023	1.00	1000
Algeria	2024	1.00	1000
Algeria	2025	1.00	1000
Algeria	2026	1.00	1000
Algeria	2027	1.00	1000
Algeria	2028	1.00	1000
Algeria	2029	1.00	1000
Algeria	2030	1.00	1000
Algeria	2031	1.00	1000
Algeria	2032	1.00	1000
Algeria	2033	1.00	1000
Algeria	2034	1.00	1000
Algeria	2035	1.00	1000
Algeria	2036	1.00	1000
Algeria	2037	1.00	1000
Algeria	2038	1.00	1000
Algeria	2039	1.00	1000
Algeria	2040	1.00	1000
Algeria	2041	1.00	1000
Algeria	2042	1.00	1000
Algeria	2043	1.00	1000
Algeria	2044	1.00	1000
Algeria	2045	1.00	1000
Algeria	2046	1.00	1000
Algeria	2047	1.00	1000
Algeria	2048	1.00	1000
Algeria	2049	1.00	1000
Algeria	2050	1.00	1000
Algeria	2051	1.00	1000
Algeria	2052	1.00	1000
Algeria	2053	1.00	1000
Algeria	2054	1.00	1000
Algeria	2055	1.00	1000
Algeria	2056	1.00	1000
Algeria	2057	1.00	1000
Algeria	2058	1.00	1000
Algeria	2059	1.00	1000
Algeria	2060	1.00	1000
Algeria	2061	1.00	1000
Algeria	2062	1.00	1000
Algeria	2063	1.00	1000
Algeria	2064	1.00	1000
Algeria	2065	1.00	1000
Algeria	2066	1.00	1000
Algeria	2067	1.00	1000

Figure 1 is a diagram illustrating the transmission of a packet over multiple subcarriers. The vertical axis represents subcarriers $f_1, f_2, f_3, \dots, f_n$. The horizontal axis represents time, with slots $TS_1, TS_2, TS_3, TS_4, \dots, TS_F$. A packet is shown as a series of slots across subcarriers. A specific slot TS_3 is highlighted, and its duration is labeled TS . The total duration of the packet is labeled T_F . The diagram also shows a K_1 SLOTS ($k_1 \leq FX_n$) label.

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FIG. 20

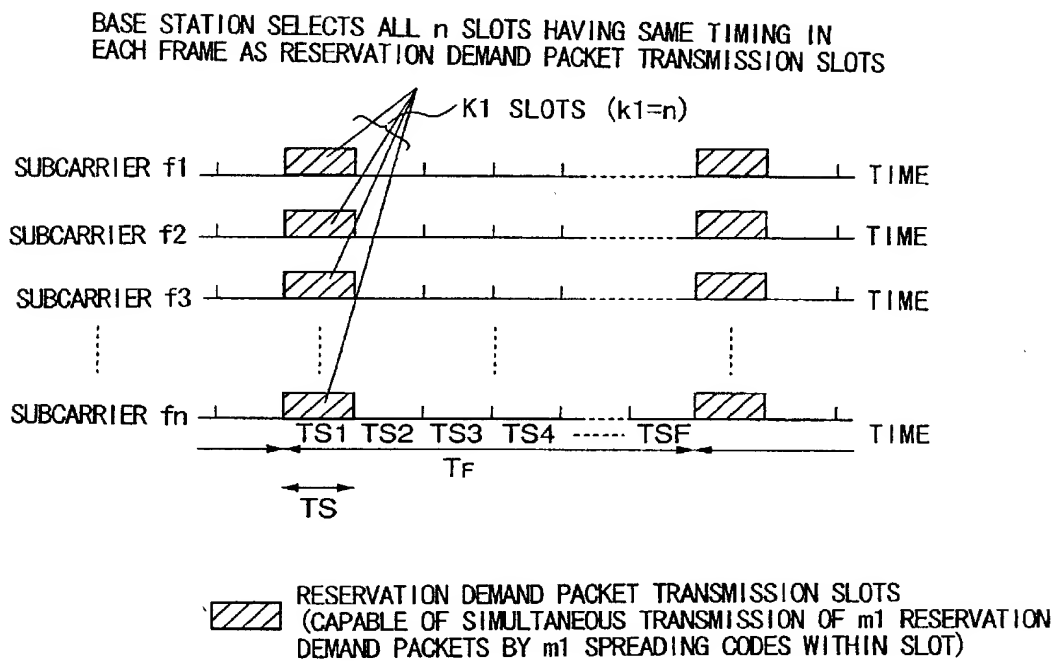
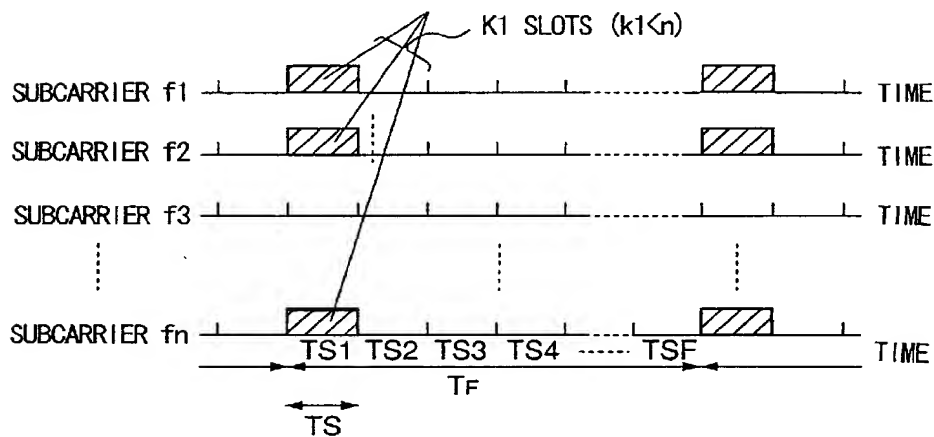


FIG. 21

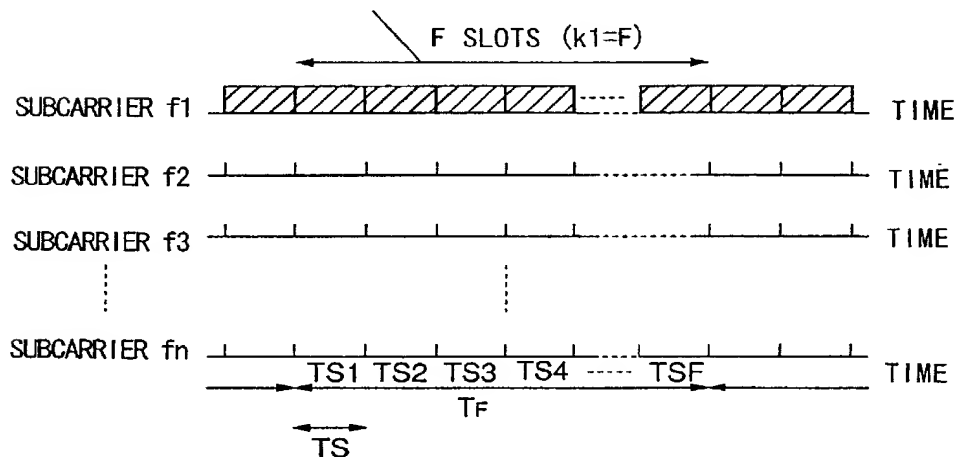
BASE STATION SELECTS ALL k_1 ($k_1 < n$) SLOTS OUT OF n SLOTS HAVING SAME TIMING IN EACH FRAME AS RESERVATION DEMAND PACKET TRANSMISSION SLOTS (ARBITRARY SELECTION FROM n SLOTS)



 RESERVATION DEMAND PACKET TRANSMISSION SLOTS
(CAPABLE OF SIMULTANEOUS TRANSMISSION OF m_1 RESERVATION DEMAND PACKETS BY m_1 SPREADING CODES WITHIN SLOT)

FIG. 22

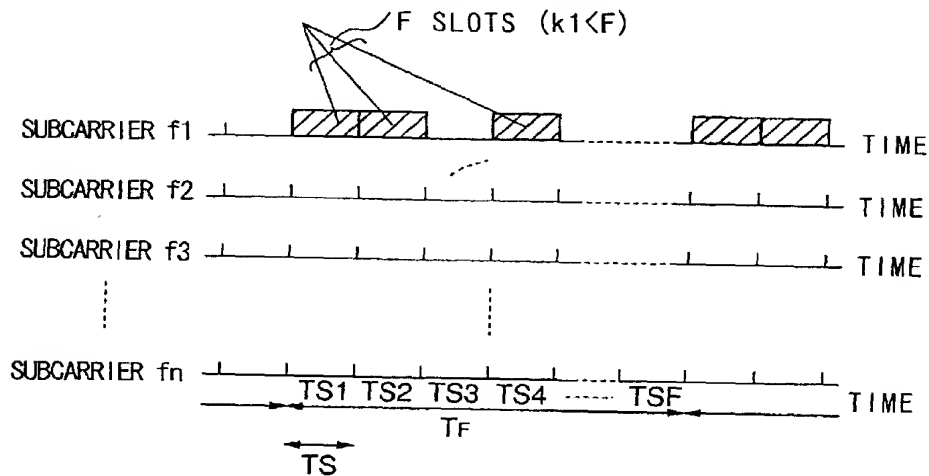
BASE STATION SELECTS ALL F SLOTS IN EACH FRAME IN SAME
SUBCARRIER AS RESERVATION DEMAND PACKET TRANSMISSION SLOTS
(ARBITRARY SELECTION OF SUBCARRIER)



 RESERVATION DEMAND PACKET TRANSMISSION SLOTS
(CAPABLE OF SIMULTANEOUS TRANSMISSION OF $m1$ RESERVATION
DEMAND PACKETS BY $m1$ SPREADING CODES WITHIN SLOT)

FIG. 23

BASE STATION SELECTS k_1 SLOTS OUT OF F SLOTS IN EACH FRAME OF SAME SUBCARRIER AS RESERVATION DEMAND PACKET TRANSMISSION SLOTS (ARBITRARY SELECTION OF SUBCARRIERS AND n SLOTS)




 RESERVATION DEMAND PACKET TRANSMISSION SLOTS
(CAPABLE OF SIMULTANEOUS TRANSMISSION OF m_1 RESERVATION
DEMAND PACKETS BY m_1 SPREADING CODES WITHIN SLOT)

FIG. 24

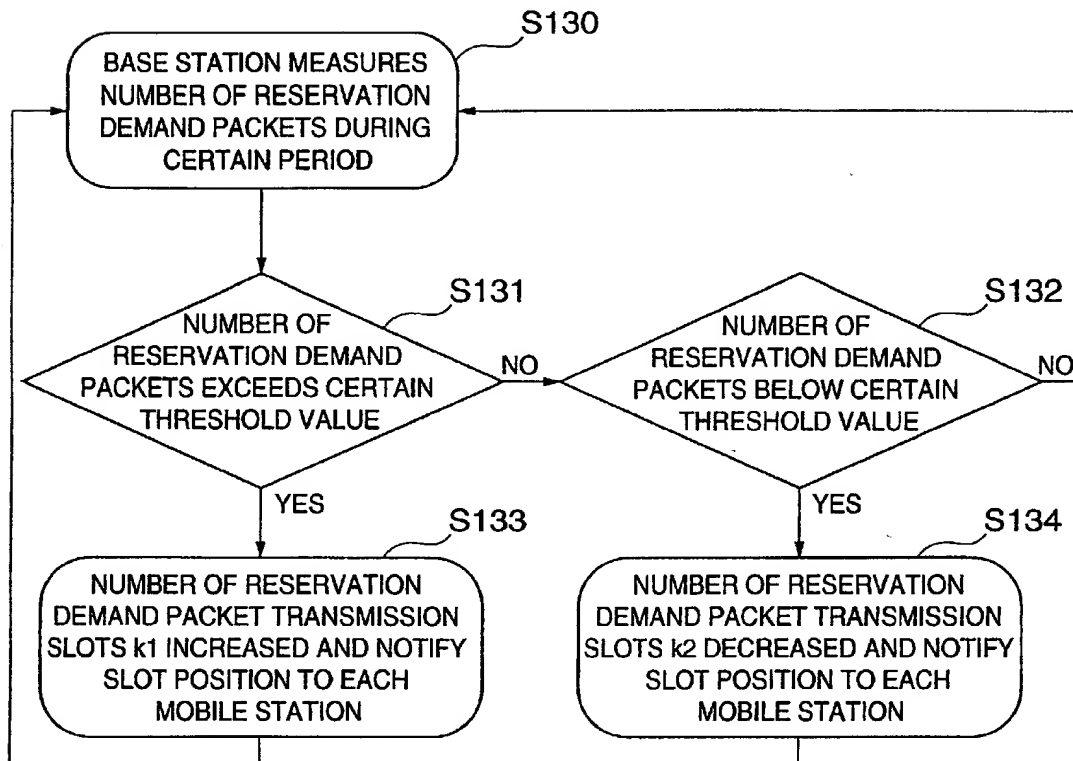
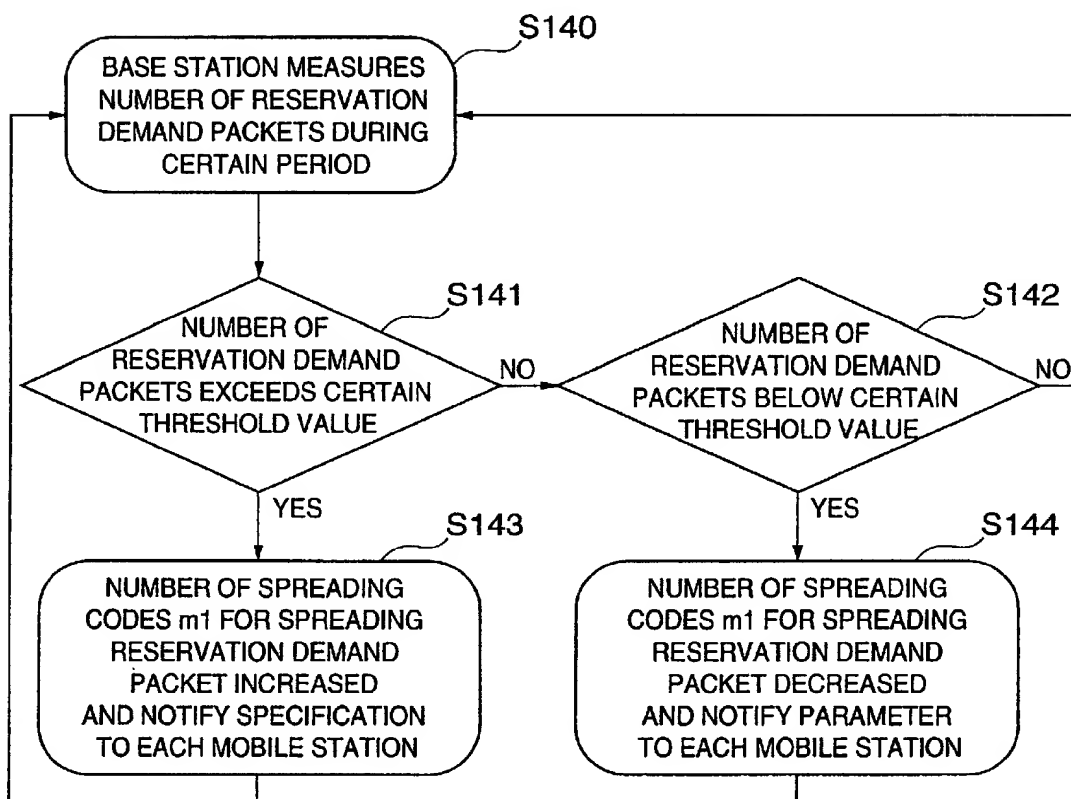


FIG. 25



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FIG. 26

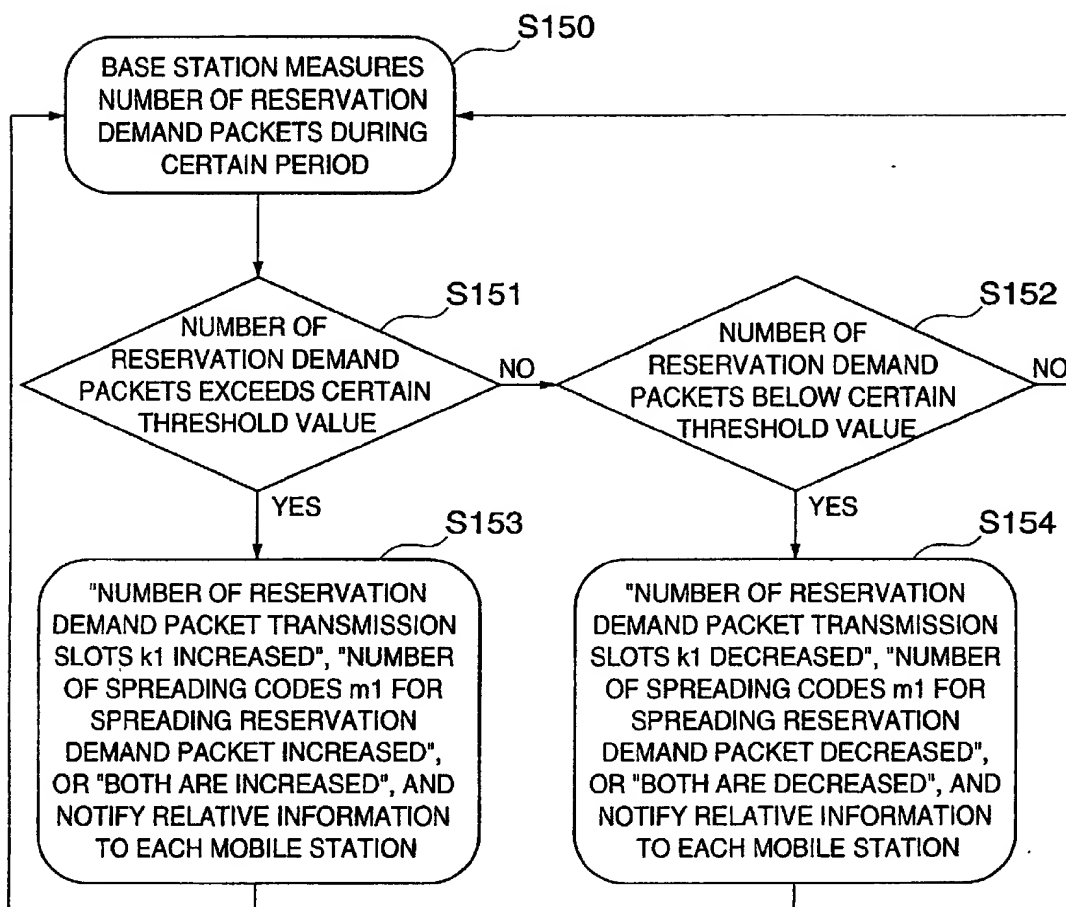


FIG. 27

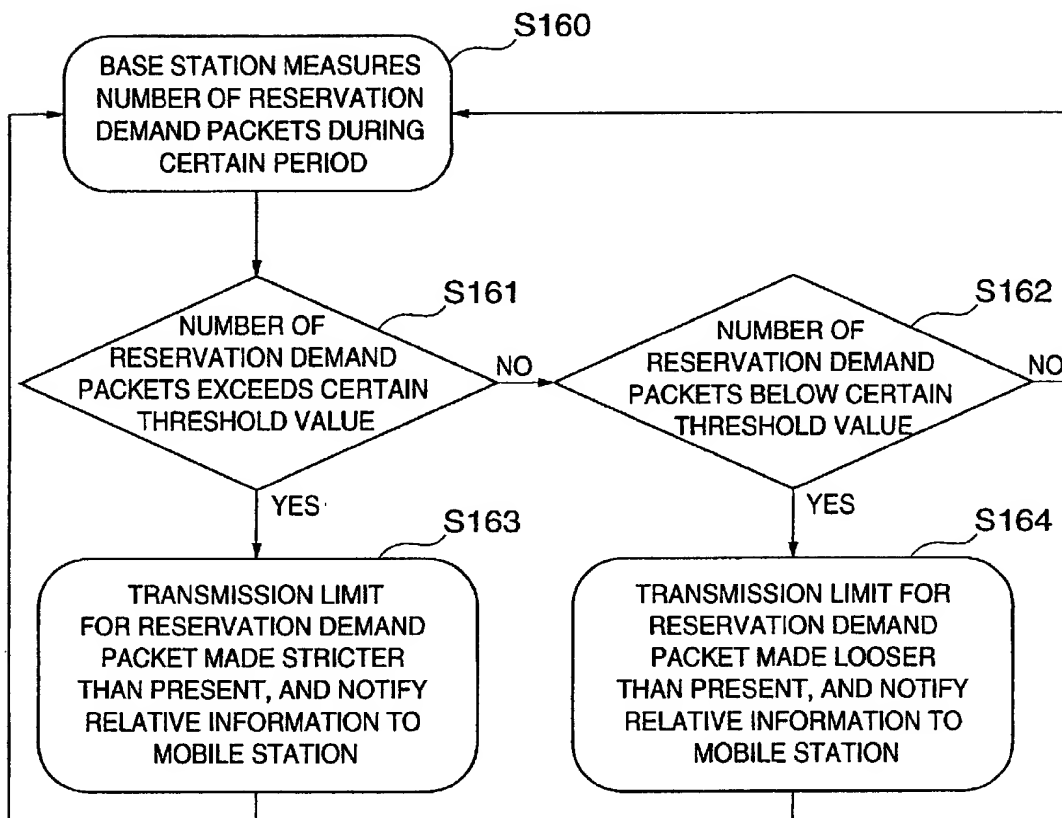
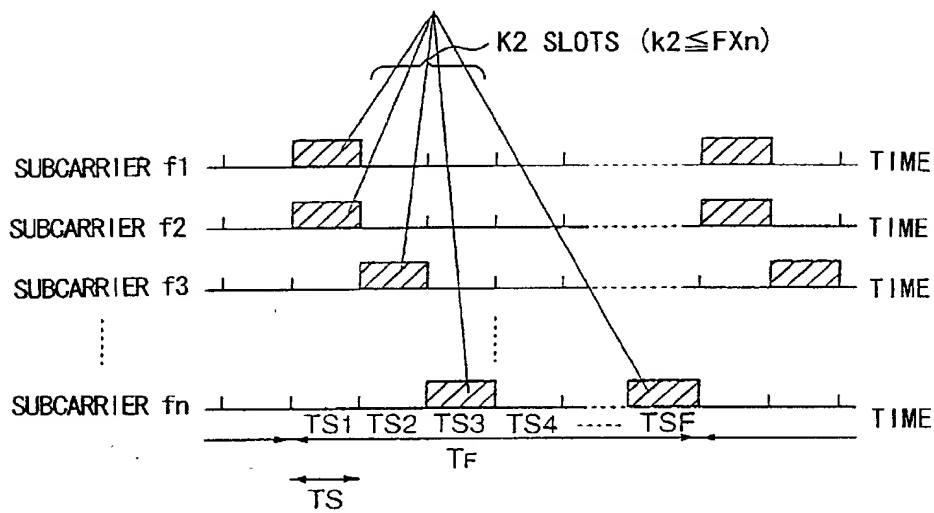


FIG. 28

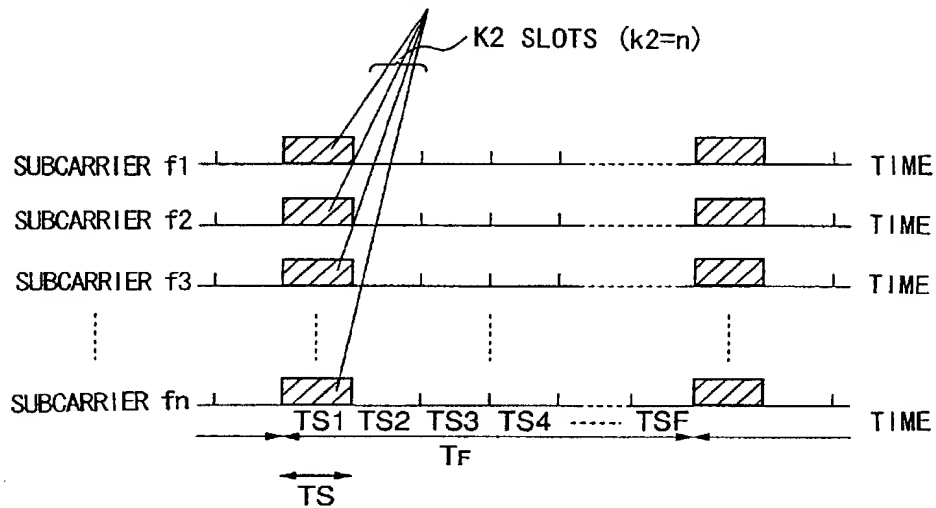
BASE STATION SELECTS k_2 ($k_2 \leq F_{xn}$) SLOTS OUT OF F_{xn} SLOTS
IN EACH FRAME AS RANDOM ACCESS PACKET TRANSMISSION SLOTS



 RANDOM ACCESS PACKET TRANSMISSION SLOTS
(CAPABLE OF SIMULTANEOUS TRANSMISSION OF m_2 RANDOM
ACCESS PACKETS BY m_2 SPREADING CODES WITHIN SLOT)

FIG. 29

BASE STATION SELECTS ALL n SLOTS OF SAME TIMING IN EACH FRAME AS RANDOM ACCESS PACKET TRANSMISSION SLOTS



 RANDOM ACCESS PACKET TRANSMISSION SLOTS
(CAPABLE OF SIMULTANEOUS TRANSMISSION OF m_2 RANDOM ACCESS PACKETS BY m_2 SPREADING CODES WITHIN SLOT)

FIG. 30

BASE STATION SELECTS k_2 ($k_2 \leq n$) SLOTS OUT OF n SLOTS OF SAME TIMING IN EACH FRAME AS RANDOM ACCESS PACKET TRANSMISSION SLOTS (ARBITRARY SELECTION FROM n SLOTS)

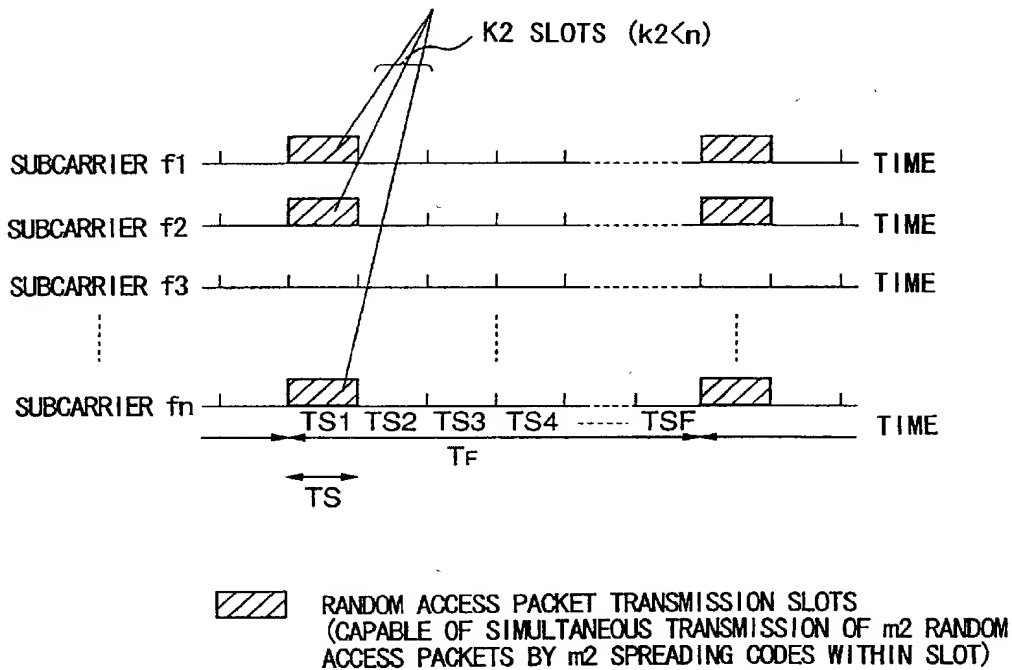
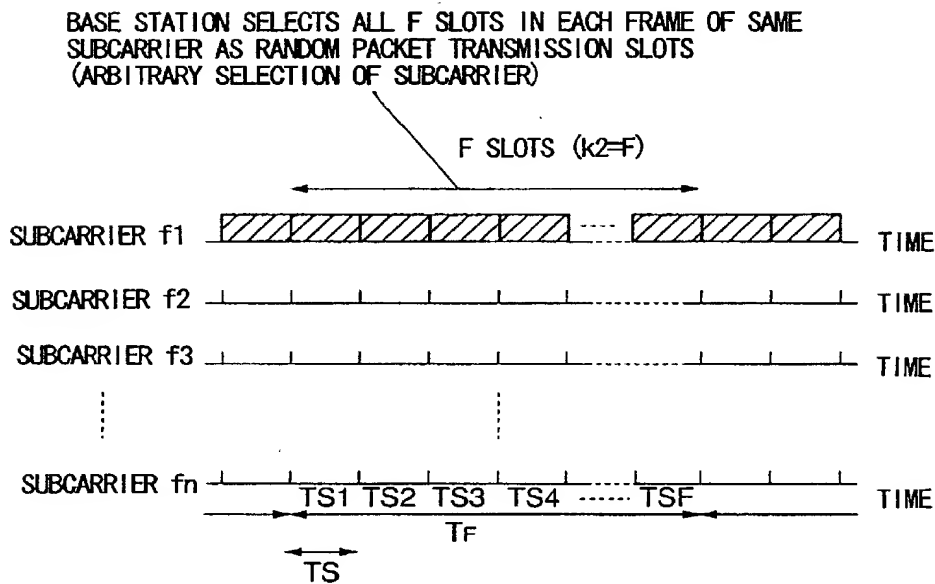


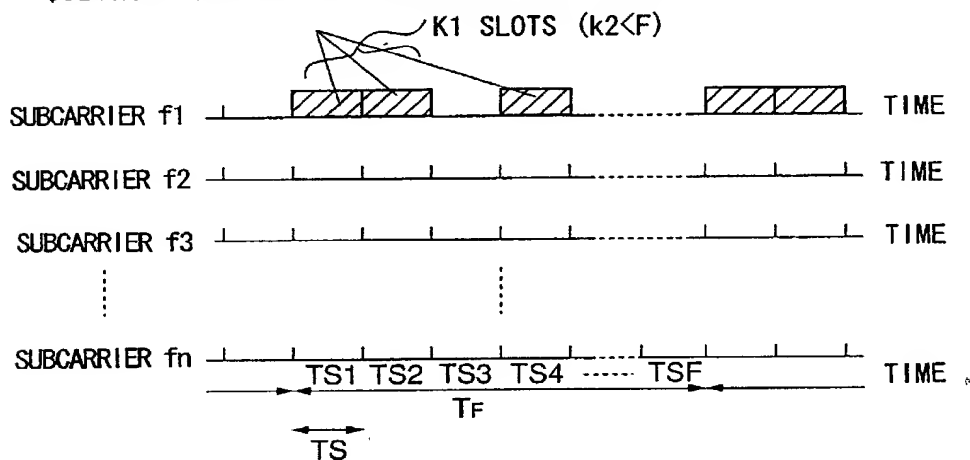
FIG. 31



 RANDOM ACCESS PACKET TRANSMISSION SLOTS
 (CAPABLE OF SIMULTANEOUS TRANSMISSION OF m_2 RANDOM
 ACCESS PACKETS BY m_2 SPREADING CODES WITHIN SLOT)

FIG. 32

BASE STATION SELECTS k_2 ($k_2 \leq F$) SLOTS FROM F SLOTS IN EACH FRAME OF SAME SUBCARRIER AS RANDOM ACCESS PACKET TRANSMISSION SLOTS (ARBITRARY SELECTION OF SUBCARRIERS AND k_2 SLOTS)



 RANDOM ACCESS PACKET TRANSMISSION SLOTS
(CAPABLE OF SIMULTANEOUS TRANSMISSION OF m_2 RANDOM ACCESS PACKETS BY m_2 SPREADING CODES WITHIN SLOT)

FIG. 33

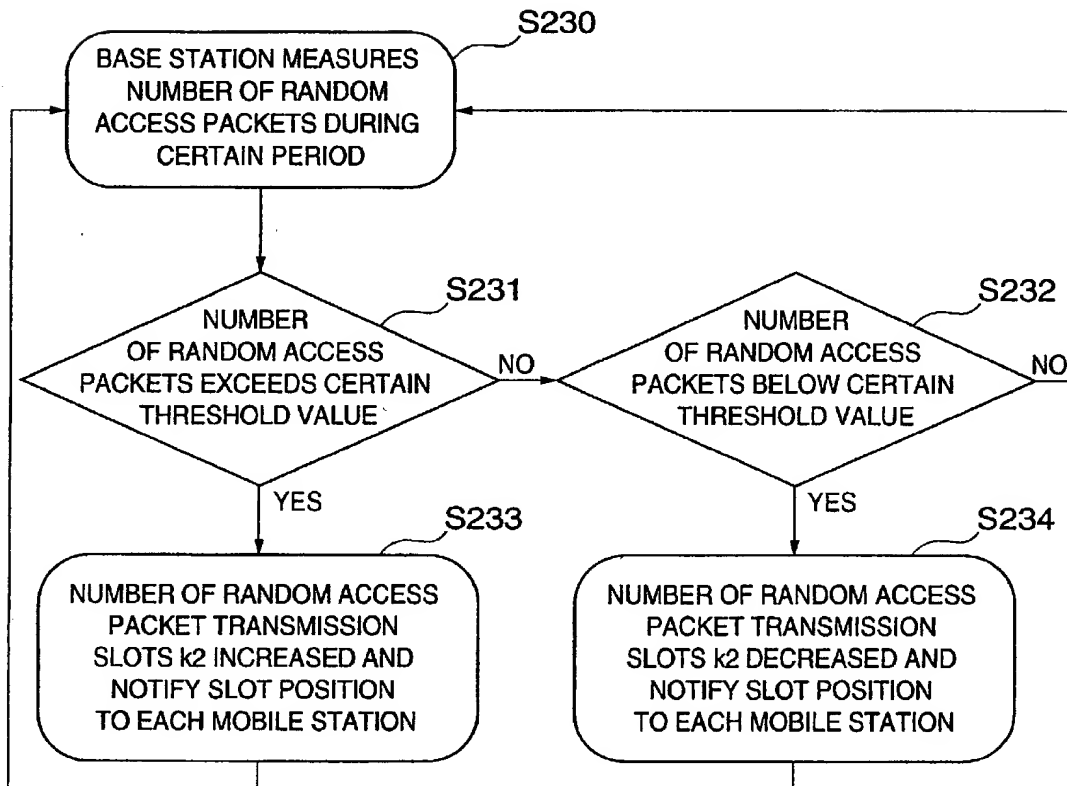


FIG. 34

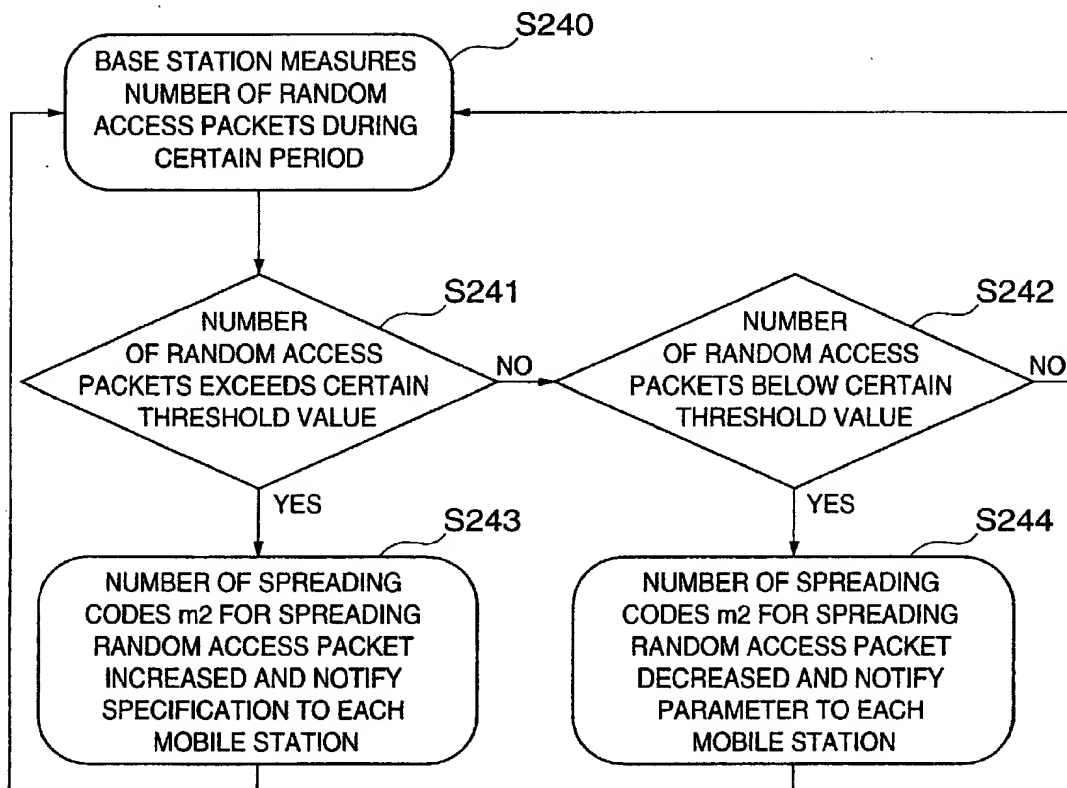


FIG. 35

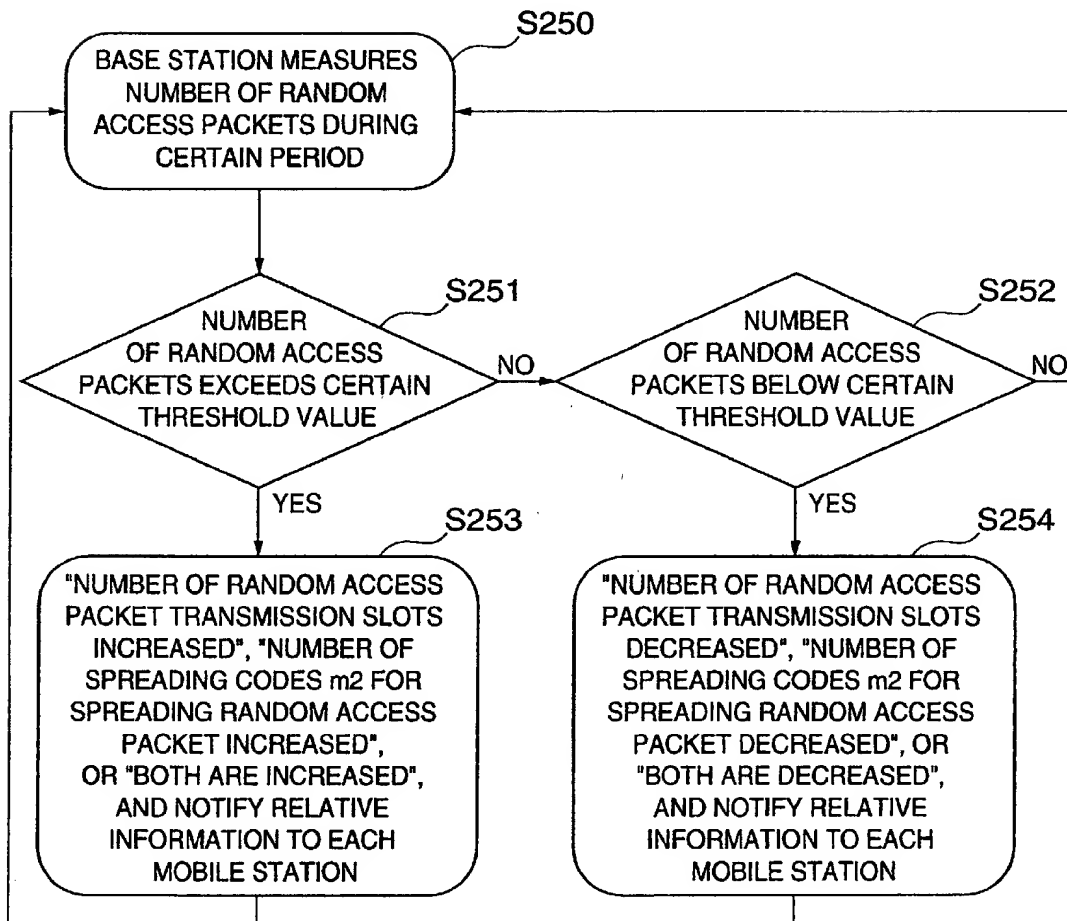


FIG. 36

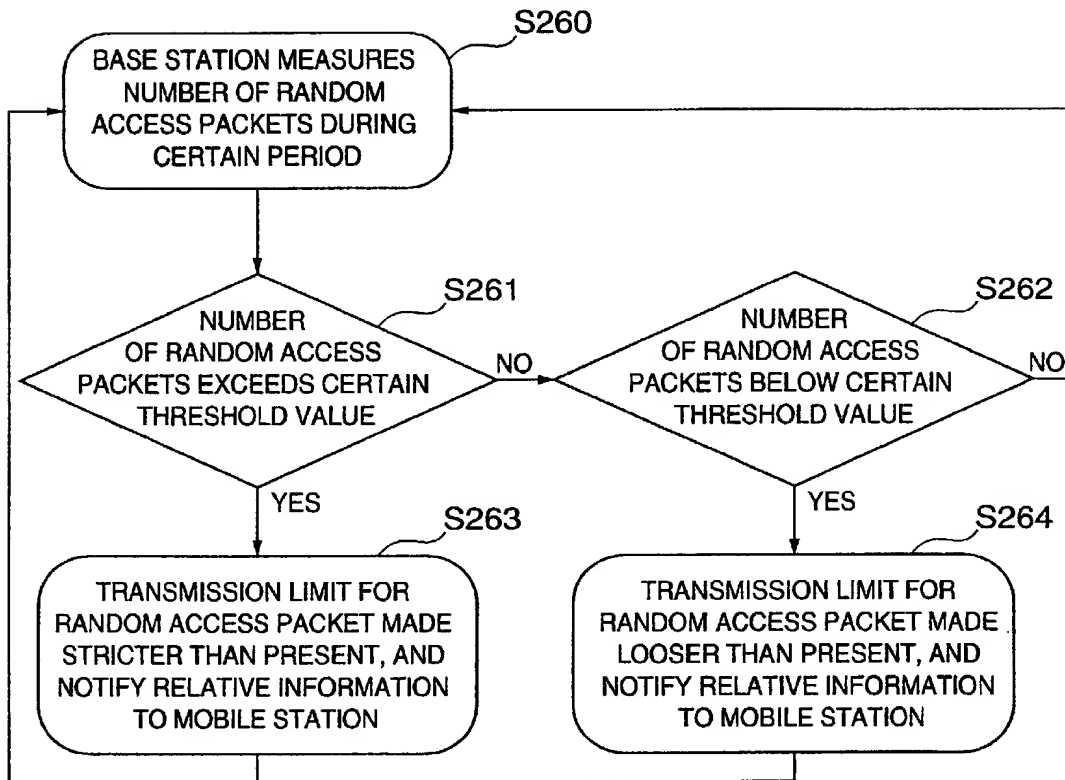


FIG. 37

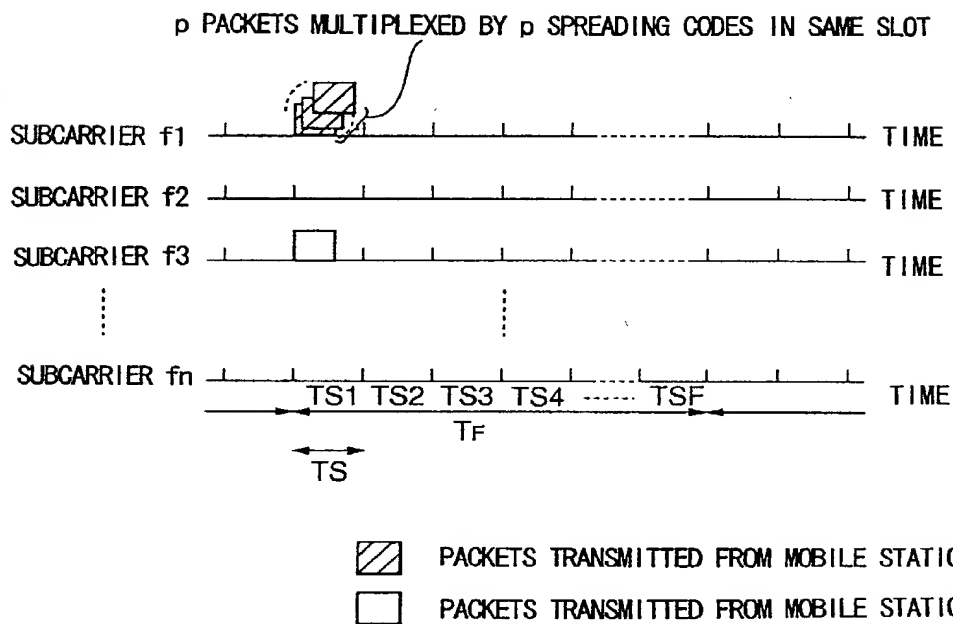


FIG. 38

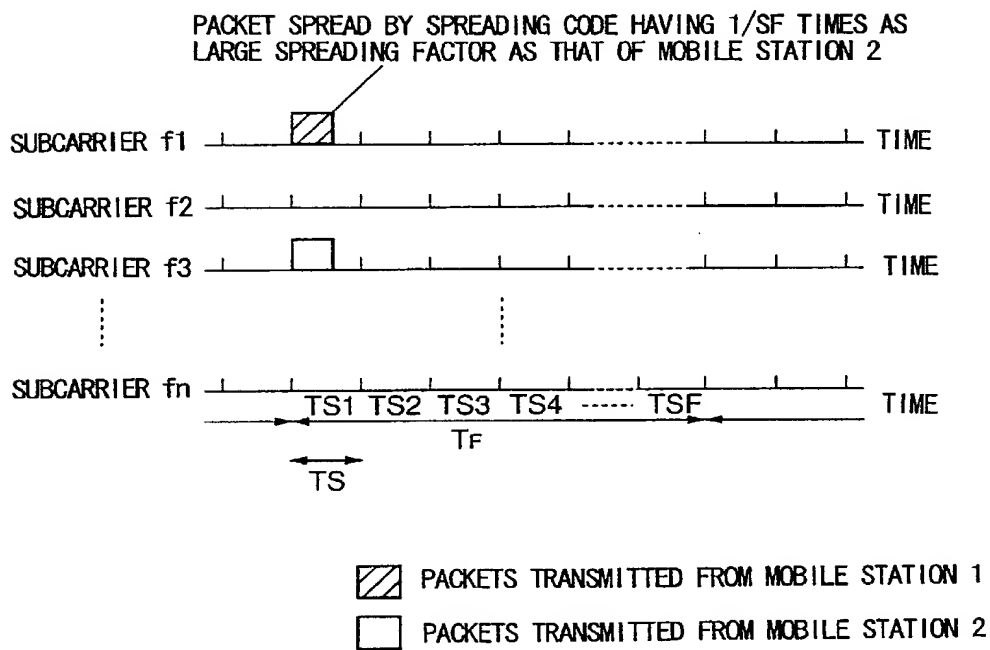


FIG. 39

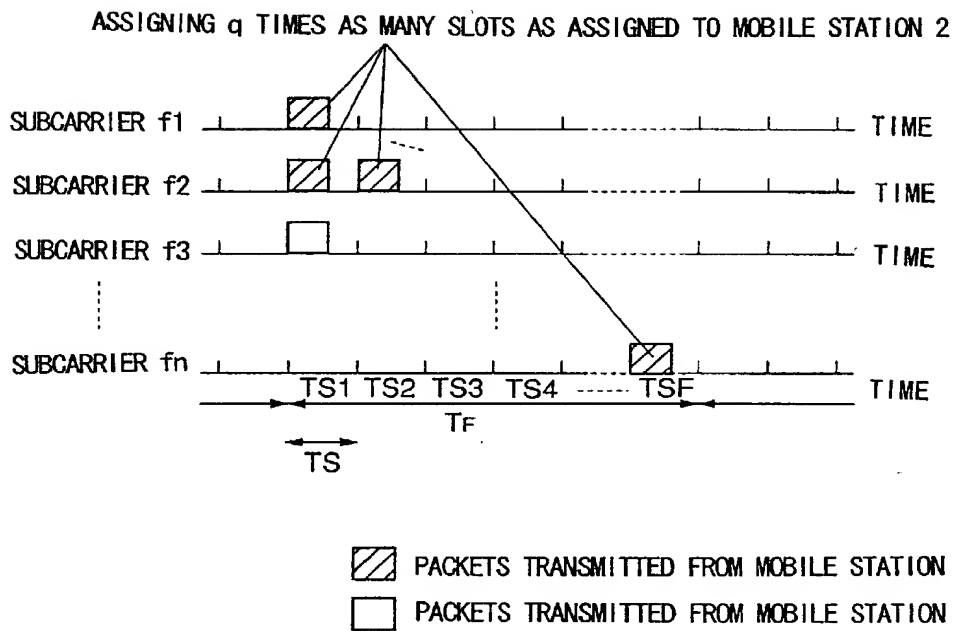
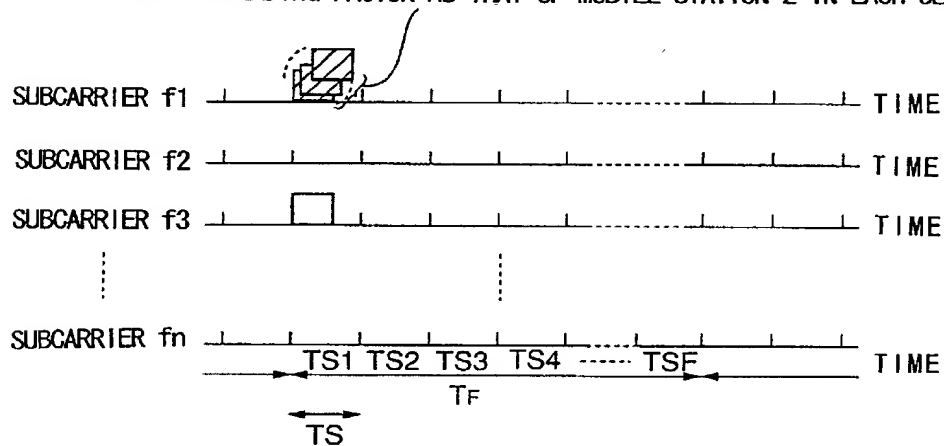


FIG. 40

MULTIPLEXING p PACKETS BY p SPREADING CODES HAVING $1/SF$ TIMES
AS LARGE SPREADING FACTOR AS THAT OF MOBILE STATION 2 IN EACH SLOT





 PACKETS TRANSMITTED FROM MOBILE STATION 1
 PACKETS TRANSMITTED FROM MOBILE STATION 2

FIG. 41

MULTIPLEXING p PACKETS BY p SPREADING CODES IN EACH SLOT ASSIGNED
WITH q TIMES AS MANY SLOTS AS ASSIGNED TO MOBILE STATION 2

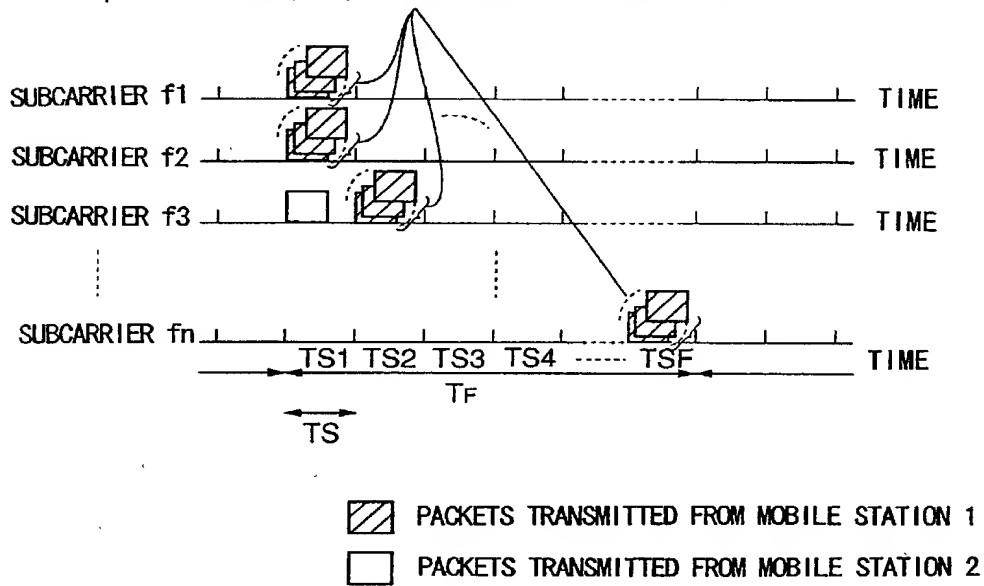


FIG. 42

PACKETS SPREAD BY SPREADING CODES HAVING $1/SF$ TIMES AS LARGE SPREADING FACTOR AS THAT OF MOBILE STATION 2 IN EACH SLOT WITH q TIMES AS MANY SLOTS AS ASSIGNED TO MOBILE STATION 2

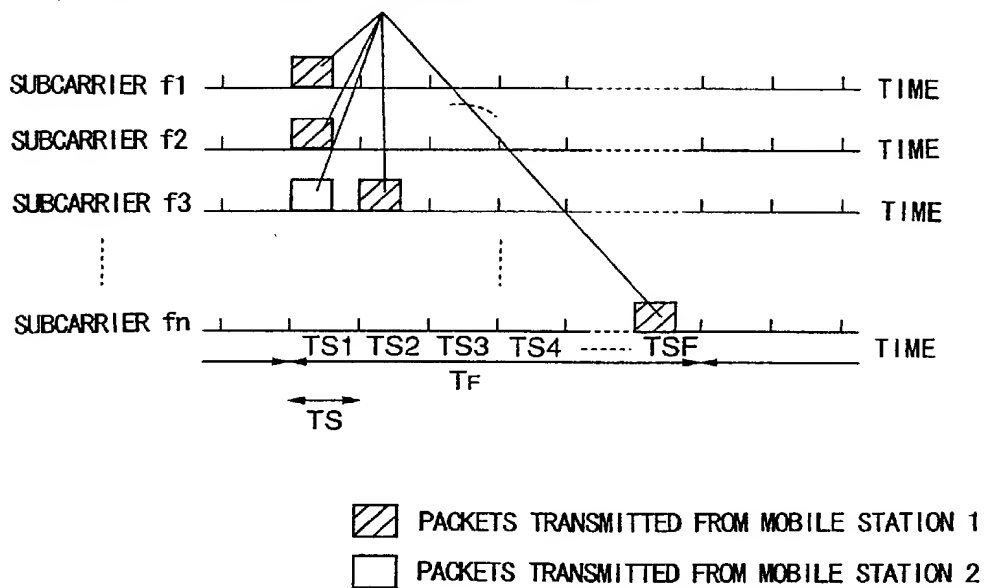


FIG. 43

MULTIPLEXING q PACKETS SPREAD BY p SPREADING CODES HAVING $1/SF$ TIMES AS LARGE SPREADING FACTOR AS THAT OF MOBILE STATION 2 IN EACH SLOT WITH q TIMES AS MANY SLOTS AS ASSIGNED TO MOBILE STATION 2

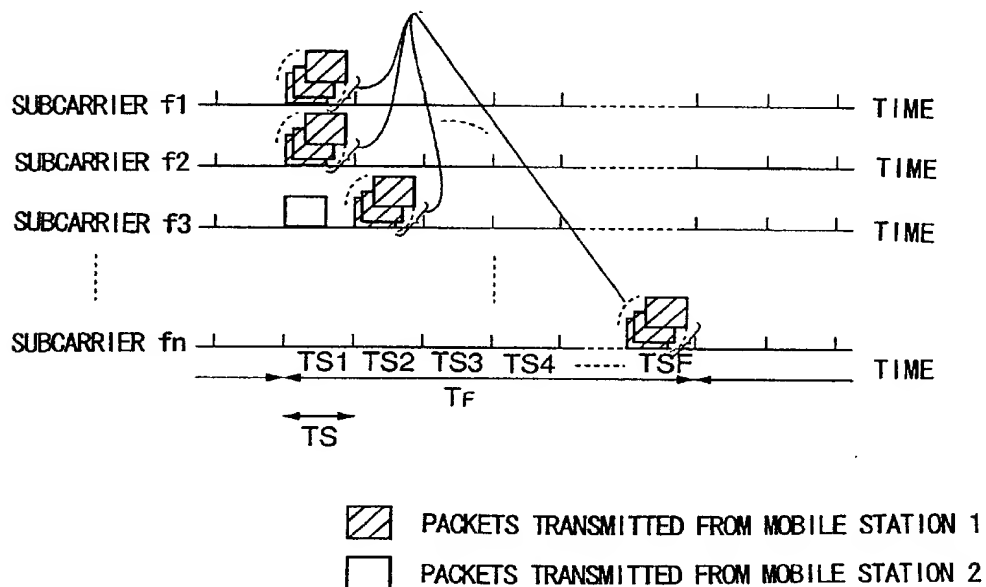


FIG. 44

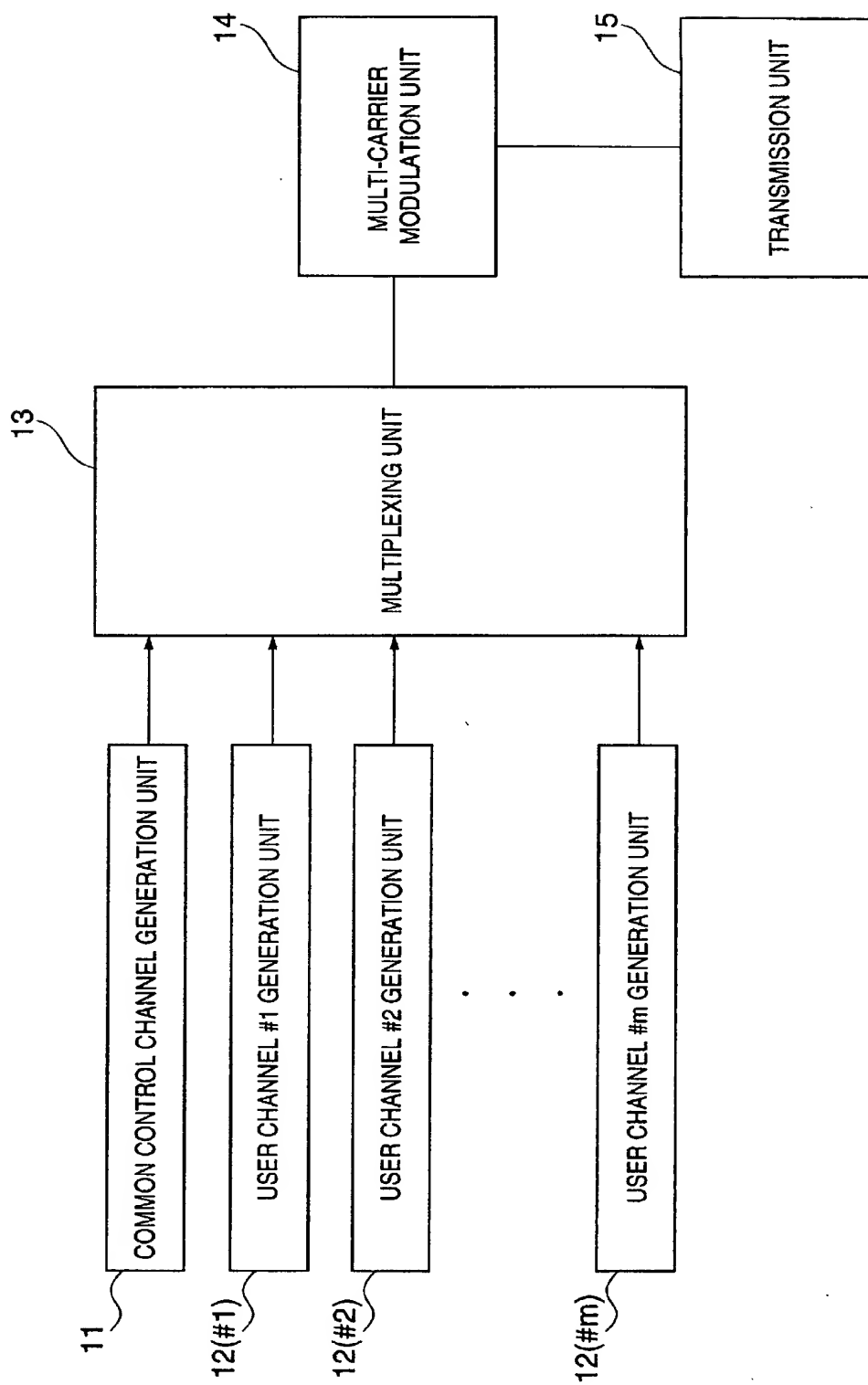


FIG. 45

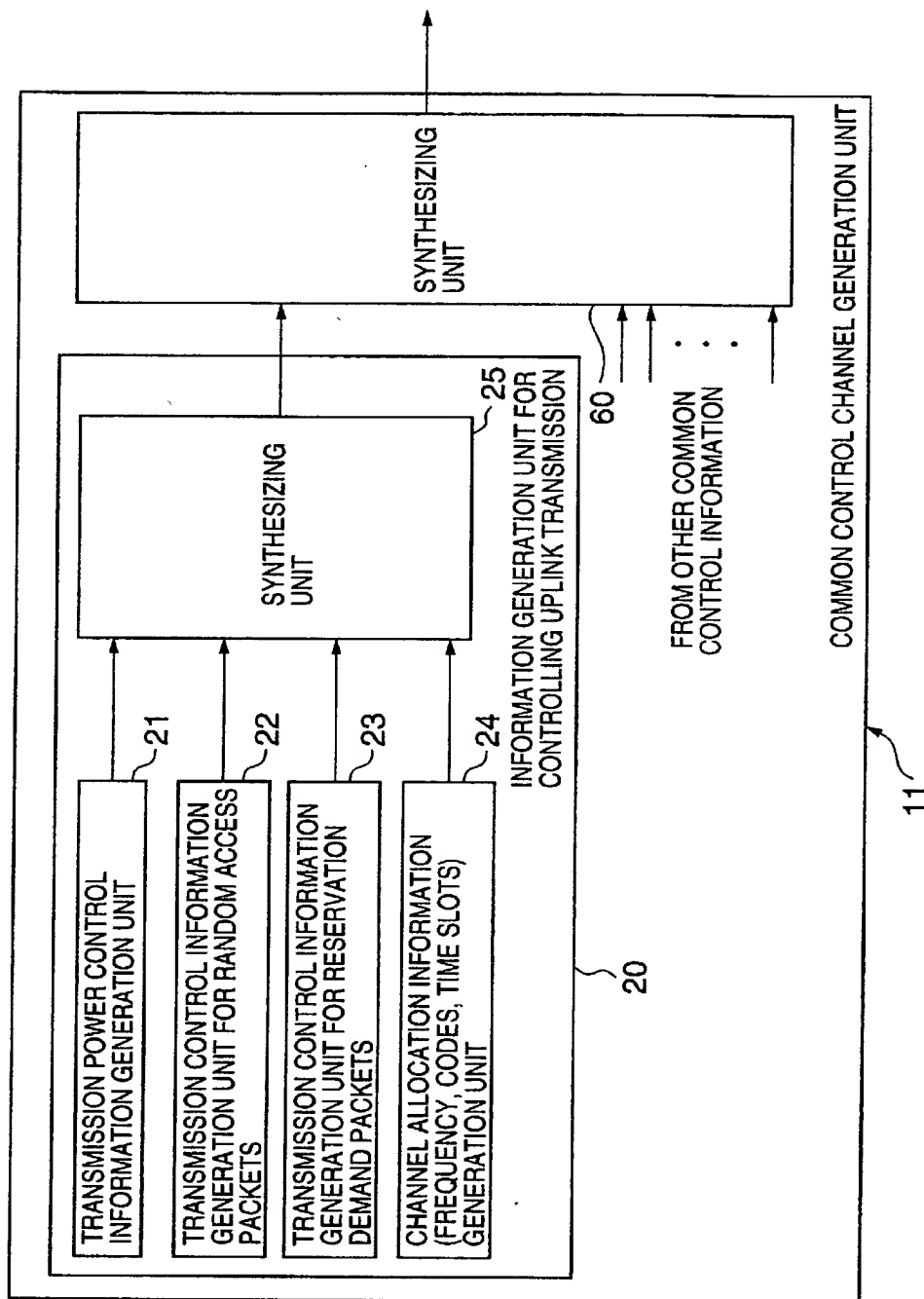


FIG. 46

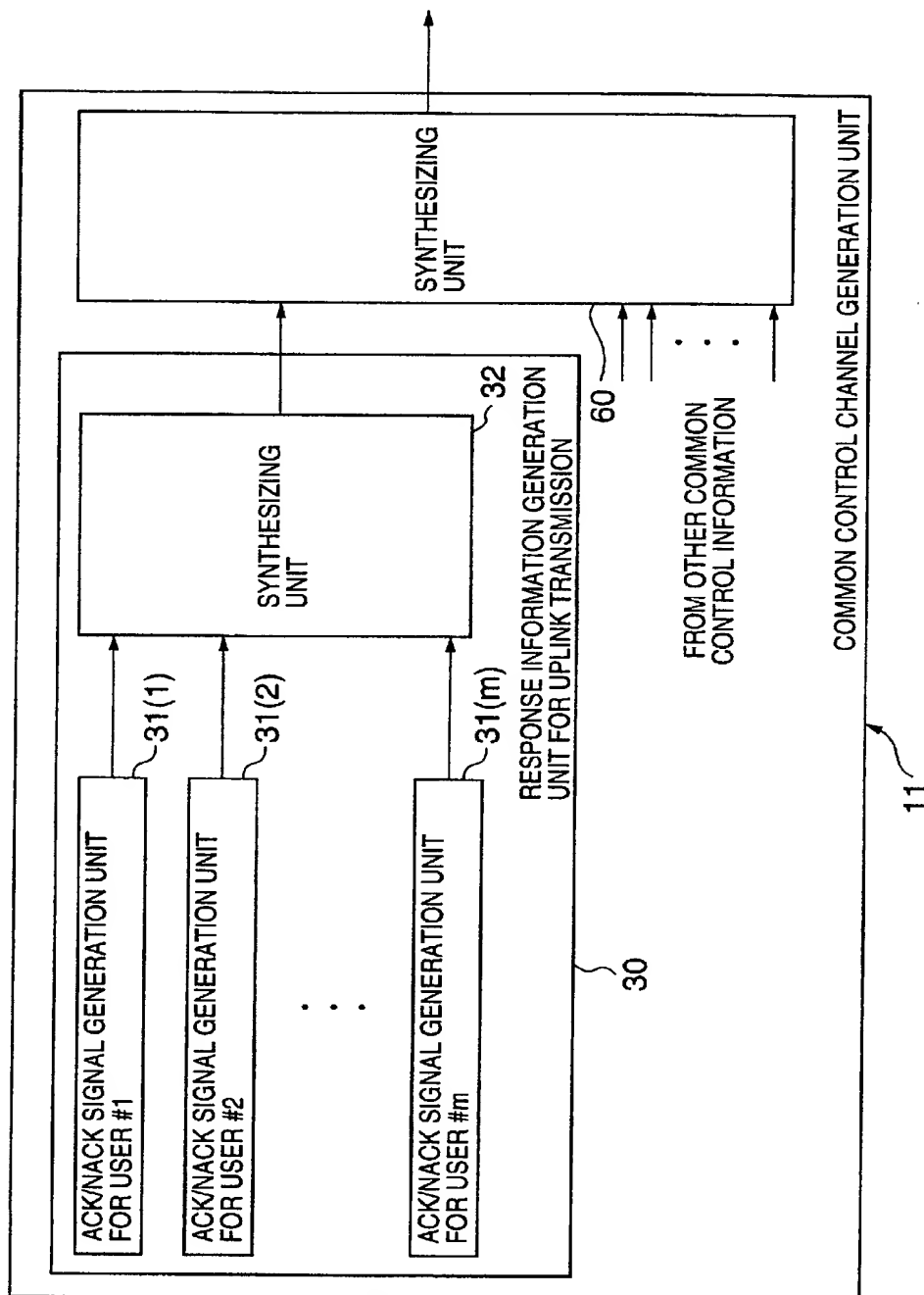


FIG. 47

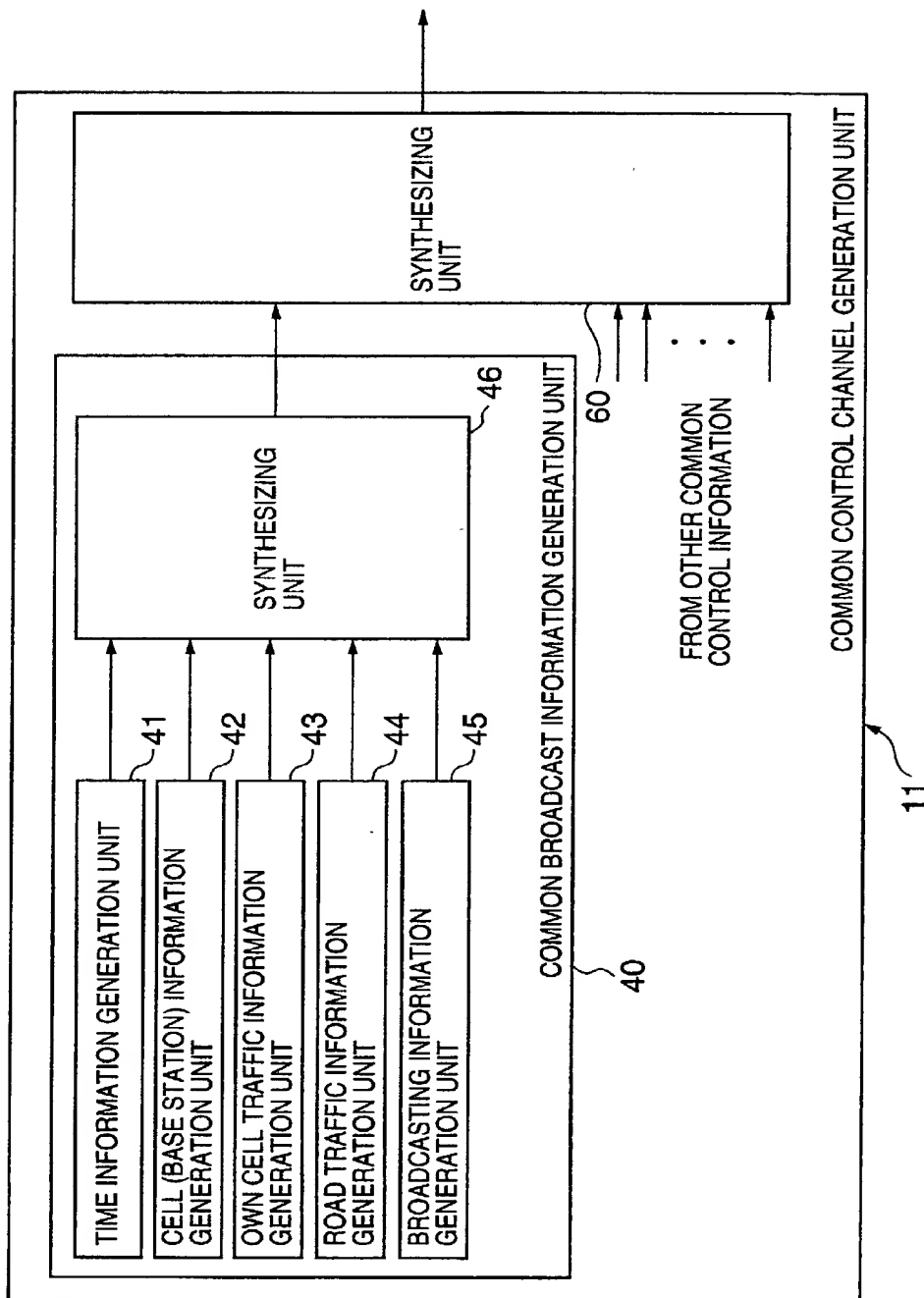
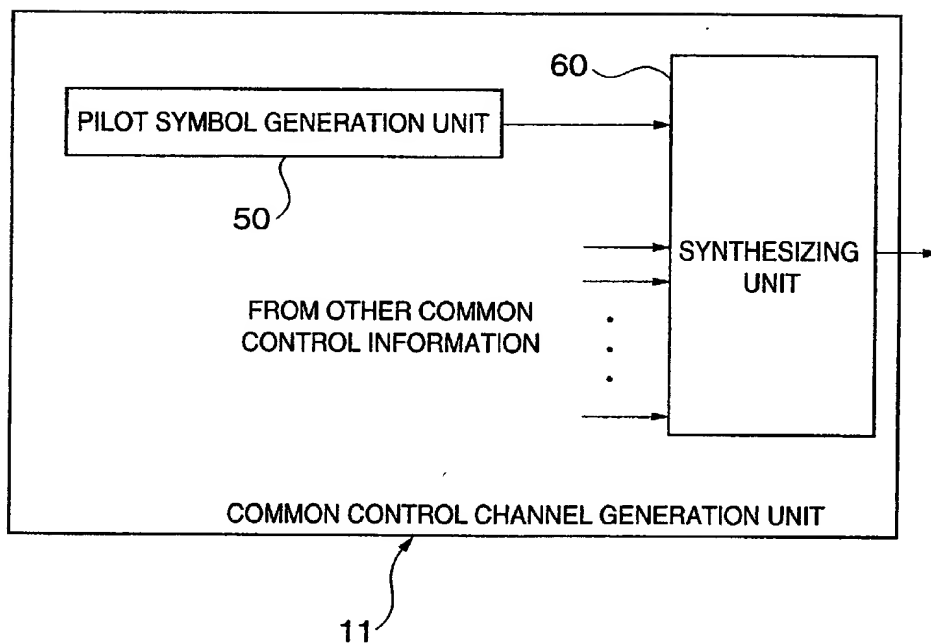


FIG. 48



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FIG. 49

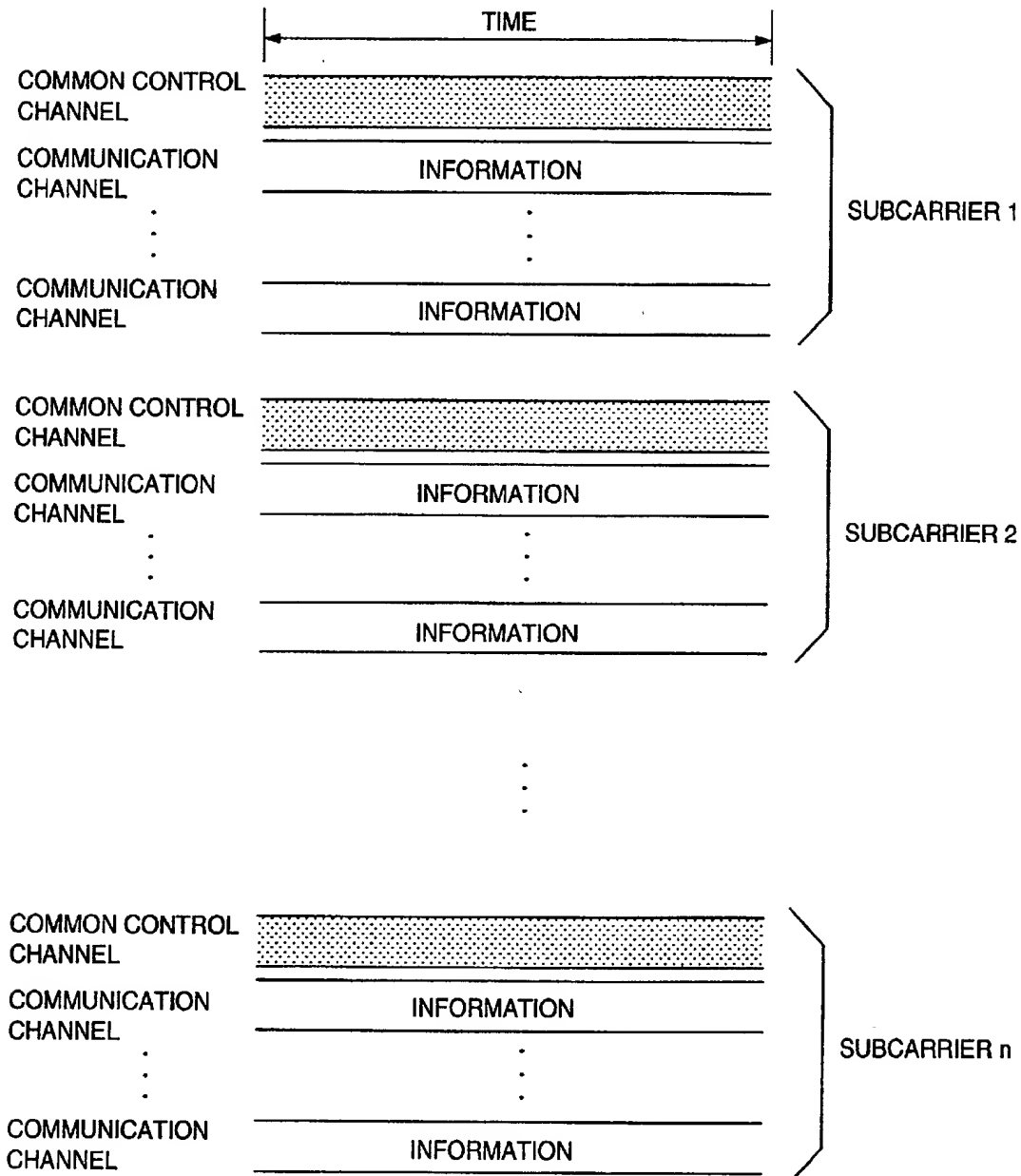


FIG. 50

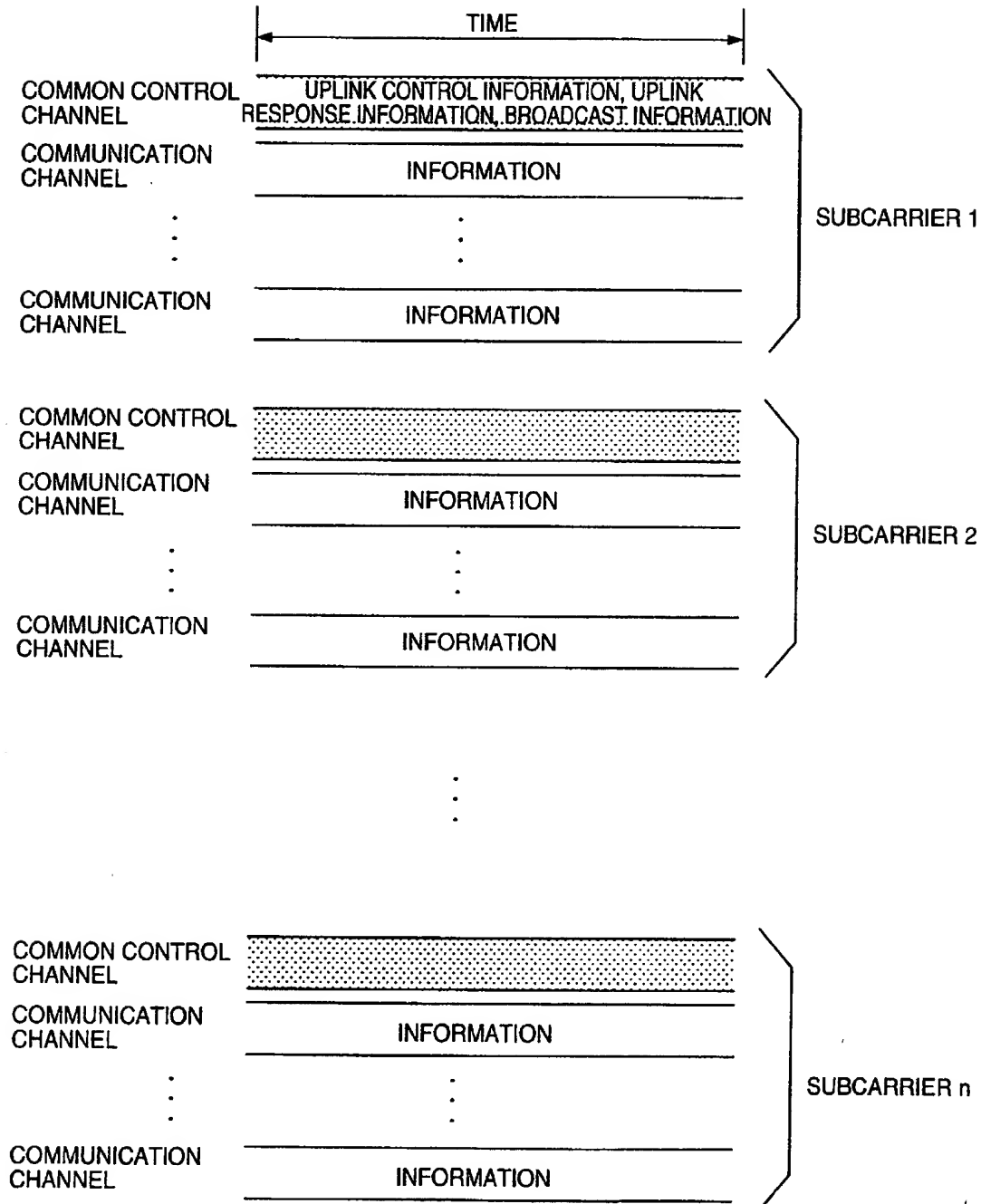


FIG. 51

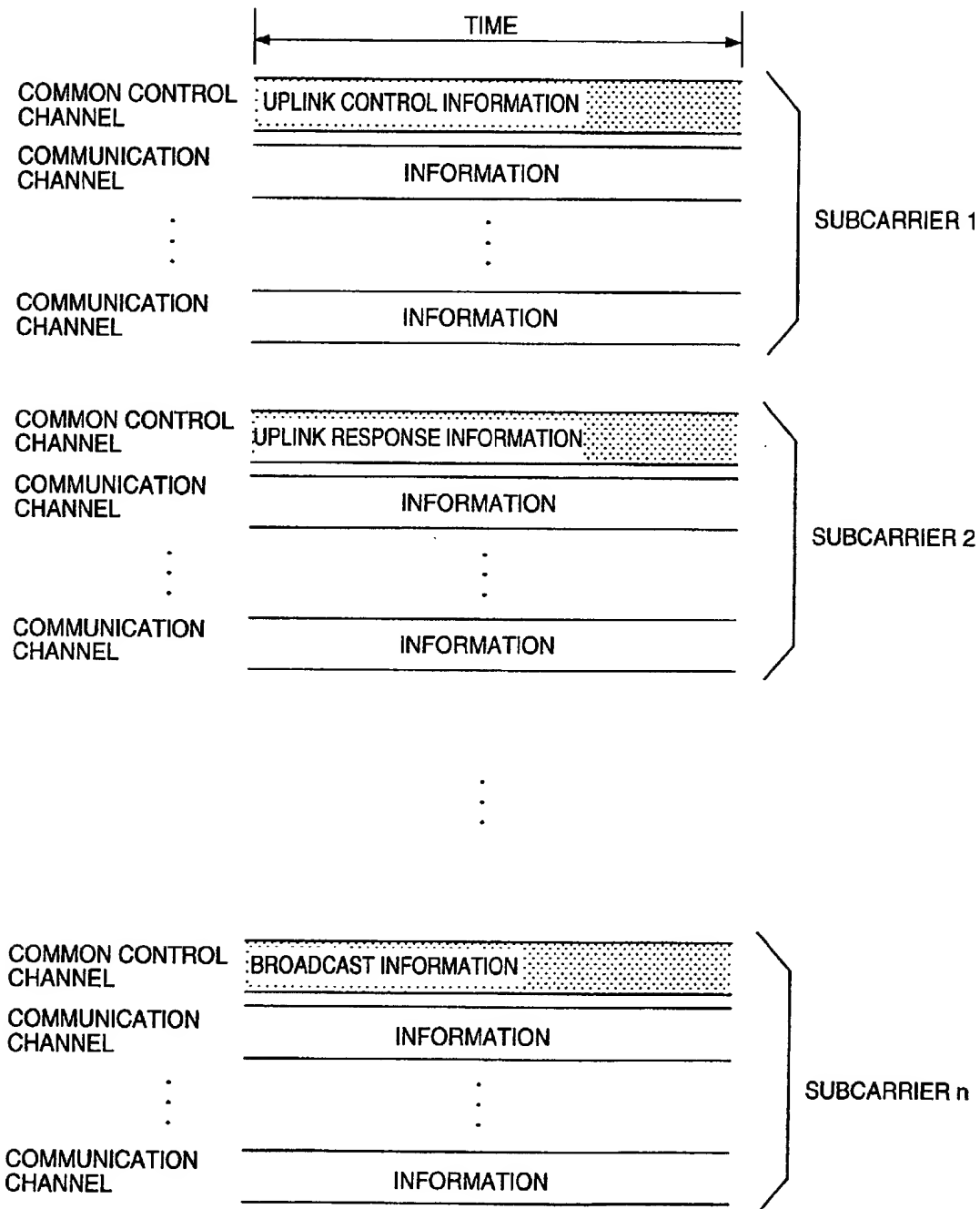


FIG. 52

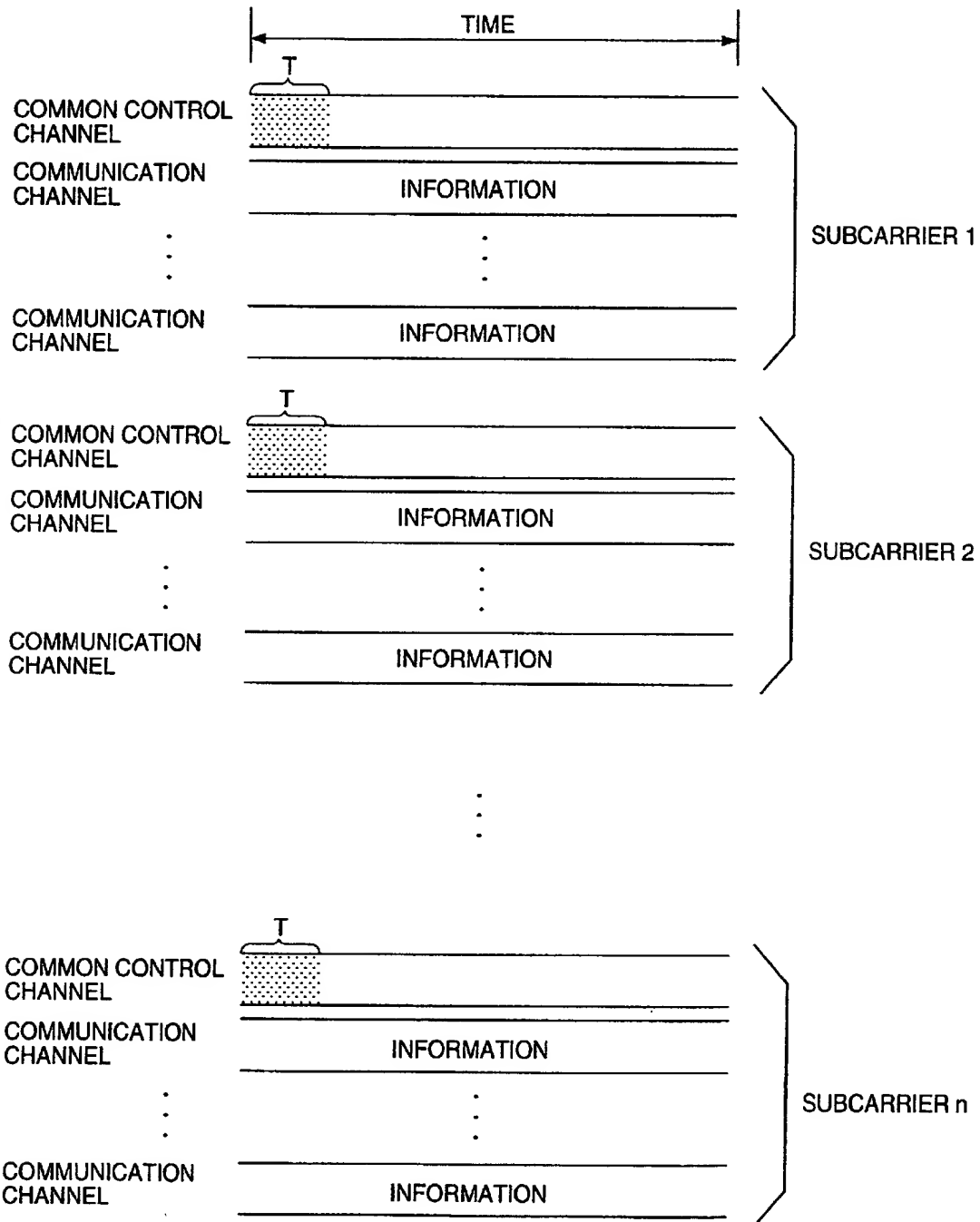


FIG. 53

